Proceedings of the
American Association of Textile Chemists and Colorists

Copyright, 1953, American Association of Textile Chemists and Colorists
Editor of Proceedings: Carl Z Draves, 30 Lahey St, New Hyde Park, N Y

AUGUST 31, 1953

1953 NATIONAL CONVENTION
CONRAD HILTON HOTEL • CHICAGO, ILLINOIS
SEPTEMBER 17-18-19

Theme: "American Achievement Today Challenges Comparison"

An Invitation
FROM THE PRESIDENT

J ROBERT BONNAR
President
(General Dyestuff Corp)

Dear A A T C C Member:

On behalf of the Council and myself, it is a pleasure to invite you to attend our Annual Meeting to be held in Chicago, September 17th, 18th and 19th. These conventions are becoming so important to the general membership and our friends in the wet-processing industry, that it hardly seems necessary to write this general invitation. I am sure there is no need, after the experience of the last eight or nine years, to call your attention to the advantage of attending these meetings. Not only does one have the opportunity of attending the very fine technical sessions, and this year seems to be no exception from the preliminary listing of the papers, but it gives those in attendance a welcome opportunity to chat and discuss various nonsecretive problems with contemporaries. I specifically would like to call your attention to the fact that there will be many committee meetings held, and each of you should seriously consider attending any one of these which seems to meet your needs, as seldom do you get a chance to know what goes on behind the scenes and really makes your organization and the various functioning bodies "click".

It has become evident that no matter how good something may seem, someone else is able to improve upon it. Such is the case with our Annual Meetings and Conventions which somehow or other always seem to get better each year, despite the fact that we have the general feeling at the time of each such meeting that no further improvement is possible. I am sure the boys are really "hot" on doing a good job from the standpoint of hotels and, although it doesn't seem possible, they say that the program for the ladies will be better than the last time we were in Chicago.

No doubt the above is not new to you, but sometimes just a little added impetus makes you want to do something which otherwise would be put off. In other words, do not fail to put in an appearance in Chicago.

Yours truly
J ROBERT BONNAR
President

Greetings from
THE CONVENTION CHAIRMAN

CHICAGO is honored in being chosen as the location for the 1953 National Convention and we are looking forward with pleasure to greeting a large attendance on September 17th. We, in the Mid-West Section, cordially invite members of the Association and guests to join with us in the fine technical and social programs that we have prepared.

For the first time in several years the entire convention will be held under one roof. The well-known Conrad Hilton Hotel, the largest in the world, has given us splendid cooperation in allocating to us all the accommodations that we require.

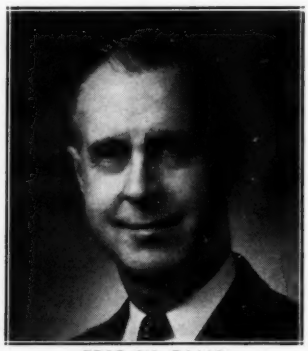
Our exhibition, which will be held in the air-conditioned Exhibition Hall, will be of great interest. There will be 47 exhibitors occupying 73 large booths. The Association Research Exhibit and the Intersectional Papers Contest will occupy 13 additional spaces. There will also be 2 large spaces fitted out as lounges where members may relax and meet their friends. Our technical program, we believe, will be one of the best that the Association has ever presented. It will consist of many fine papers given by men who are outstanding in the industry.

This year we are combining the Alumni Luncheon with the Student Papers Contest, and consequently, the luncheon will be open to all who are registered at the Convention. The Olney Medal will be awarded at a special luncheon as was done last year and we would like to have a large attendance at this event.

The Intersectional Paper Contest will also offer several interesting papers which represent many months of effort on the part of the various Sections.

An interesting program has been prepared for the ladies and we are hoping that all of the ladies who attend the convention will take advantage of the group program that is made available.

The City of Chicago is well worth a visit especially in Mid-September at the time of our Convention. Chicago boasts of many excellent restaurants, good shows and other interesting amusements. Chicago has many fine museums, such as the Museum of Science and Industry and the Field Museum of Natural History. The Art Institute of Chicago is one of the foremost Art Galleries in America and contains, besides many treasured paintings, an interesting exhibit on textiles. The City is also proud of its very fine Planetarium and Aquarium. Chicago is an excellent shopping center including internationally-known department stores and exclusive shops.



ERIC W CAMP
General Chairman

Excellent transportation facilities are available to Chicago from all parts in the country.

Our committees have worked diligently for several months past in an effort to make our program interesting to all members and we, therefore, sincerely hope that as many members as possible will attend.

ERIC W CAMP
Convention Chairman

Welcome to Chicago, Illinois
FROM THE CHAIRMAN OF THE MID-WEST SECTION

AS your host for the 1953 National Meeting, we sincerely welcome each and every member and guest. The Chairman of this meeting, Eric W Camp, and his Committees have worked diligently for over a year to make this one of the outstanding National Meetings. The hotel facilities are of the finest to be had. We have a well-rounded technical program, and papers to be given constitute many months of hard work.

An excellent program of entertainment for the ladies has been arranged. Chicago, being the largest city in the midwest, offers everything in the way of entertainment for all.

So plan now to be with us September 17th, 18th and 19th. We are ready and waiting to help you have a most enlightening and enjoyable time with us in Chicago.

Looking forward to greeting all of you.

ALFRED J OLSON
Chairman, Midwest Section

ALFRED J OLSON
Chairman, Mid-West Section

1953 CONVENTION

Program

All Events at the Conrad Hilton Hotel

Thursday, September 17th

9:00 am to 5:00 pm — REGISTRATION — Exhibition Hall Lobby

10:00 am to 10:00 pm—EXHIBITION—Exhibition Hall

10:30 am — NATIONAL COUNCIL MEETING — West Ballroom

12:00 noon—ALUMNI LUNCHEON and STUDENT PAPERS CONTEST—Grand Ballroom

12:30 pm—PRESS LUNCHEON—Private Dining Room 1

2:00 pm to 5:00 pm—PERSONNEL SERVICE—Private Dining Rooms 9 and 10

2:00 pm—TECHNICAL MEETING—Grand Ballroom

"SCIENCE FIBERS"

Elliott Morrill, The Best Foods, Inc, Presiding

"The Dynel 'Inner Structure' "—C A Setterstrom, Carbide and Carbon Chemicals Corp

"Acetate Blends of Improved Performance"—B S Sprague, Celanese Corporation of America

"Recent Advances in Dyeing Orlon Acrylic Fiber and Dacron Polyester Fiber and Blends of These with Other Fibers"—J F Laucius, Jackson Laboratory, E I du Pont de Nemours & Co, Inc

"Laundering Properties of the Science Fibers"—George H Johnson, American Institute of Laundering

Friday, September 18th

8:00 am—BREAKFAST, EXECUTIVE COMMITTEE ON RESEARCH—Private Dining Room 5

9:00 am—MEETING OF NONWOVEN FABRICS COMMITTEE—Private Dining Room 6

9:00 am to 5:00 pm — REGISTRATION — Exhibition Hall Lobby

9:00 am to 12:00 noon—PERSONNEL SERVICE—Private Dining Rooms 9 and 10

9:00 am—TECHNICAL MEETING—South Ballroom

"HOSIERY"

A G Alexander, Arkansas Company, Inc, Presiding

"Color Development and Its Relation to Fashion"—Helen Sisson, Phoenix Hosiery Company

"A New Method of Vat Dyeing of Hosiery"—Robert D Blum, Jr, May Hosiery Mills

"Woolen and Worsted Spun Yarn in Hosiery"—Elwood W Munz, Richard C O'Brien (Yarns)

"How the System of Yarn Manufacturing, as well as the Fiber's Physical Properties, Affects the Characteristics of Yarn for Use in Half-Hose"—John B Caron, Caron Spinning Company

9:00 am—TECHNICAL MEETING—West Ballroom

"WOOL"

Herman Boxser, Acadia Synthetic Products Division, Presiding

"Practical Aspects of Wool Scouring"—R E Wolfrom, Rohm and Haas Company

"The Nature of the Modification of Wool by Various 'Chlorination' Processes and their Effect on the Wear-Life of Shrink-Resistant Materials"—Daniel Frishman, Harris Research Laboratories

"Application of Calcofast Dyes to Wool"—Henry E Millson, Calco Chemical Division, American Cyanamid Company

"The Dyeing Characteristics of Different Wool Grades"—William F Brommelsiek, Forstmann Woolen Co

10:00 am to 10:00 pm—EXHIBITION—Exhibition Hall

12:00 noon—OLNEY MEDAL AWARD LUNCHEON—North Ballroom

"The Medalist, the Man"

"The Medalist, the Scientist"

Presentation of Medal

"Address of the Medalist"—Roland E Derby

1:00 pm to 5:00 pm—PERSONNEL SERVICE—Private Dining Rooms 9 and 10

2:00 pm—TECHNICAL MEETING—South Ballroom

"COTTON"

H T Latham, E I du Pont de Nemours & Co, Inc, Presiding

"Cotton—An Old Fiber with a New Future"—Leonard Smith, National Cotton Council of America

"Better Mercerizing for Improved Luster"—Arnold M Sookne, Harris Research Laboratories

"The Behavior of Optical Bleaching Agents on Cellulosic Materials"—S N Glarum, Ciba Company, Inc

"The Practical Partial Acetylation of Cotton"—Edmund N Buras, Jr, Southern Regional Research Laboratory, United States Department of Agriculture

2:00 pm—TECHNICAL MEETING—West Ballroom

"TEXTILE AUXILIARIES"

N A Ruston, Emery Industries, Inc, Presiding

"New Silicone Finishes for Wool"—F L Dennett, Dow Corning Corporation

"Absorption of Detergents in the Dyeing Process"—Lester F Hoyt, National Aniline Division, Allied Chemical & Dye Corporation

"Polyvinyl Pyrrolidone—A Versatile Compound with Textile Use Potential"—E C Hansen, Antara Division, General Dyestuff Corporation

"Emulsion Polymers and their Textile Applications"—Leonard Shapiro, American Polymer Corporation

"Antistatic Finishes for Textiles"—Mason Hayek, Jackson Laboratory, E I du Pont de Nemours & Co, Inc

Saturday, September 19th

8:00 am — BREAKFAST, NATIONAL CONVENTION COMMITTEE—Private Dining Room 6

9:00 am to 12:00 noon—PERSONNEL SERVICE—Private Dining Rooms 9 and 10

9:00 am to 5:00 pm — REGISTRATION — Exhibition Hall Lobby

9:00 am—INTERSECTIONAL CONTEST—North Ballroom—Frank J O'Neil, Pacific Mills, Presiding

10:00 am to 2:00 pm—EXHIBITION—Exhibition Hall

7:00 pm—CONVENTION BANQUET—Grand Ballroom

Eric W Camp, Presiding

Samuel L Hayes, Toastmaster

Address by Alfred J Olson, Mid-West Section Chairman

President's Address—J Robert Bonnar

American Dyestuff Reporter Award—P Theel

Intersectional Contest Awards—F J O'Neil

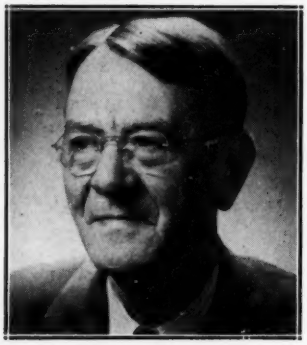
"New Frontiers—Exciting and Challenging"—Hugh M Comer

PAST PRESIDENTS

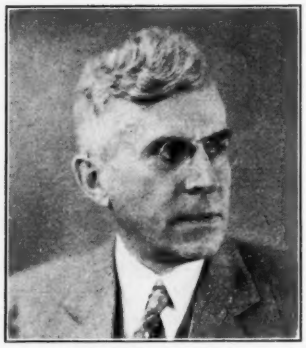
(An asterisk follows the names of the deceased)

LOUIS A OLNEY* (Founder)
1922-1927

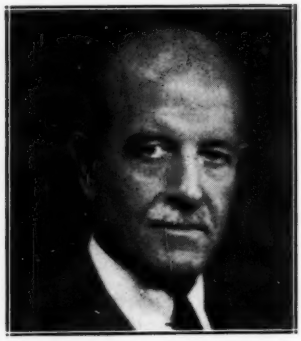
ELVIN H KILLHEFFER
1928-1930



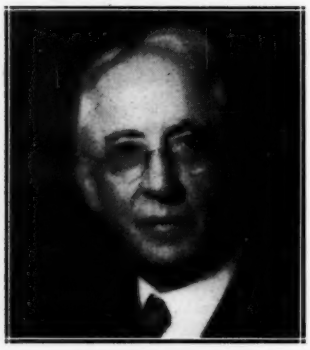
P J WOOD
1931-1932



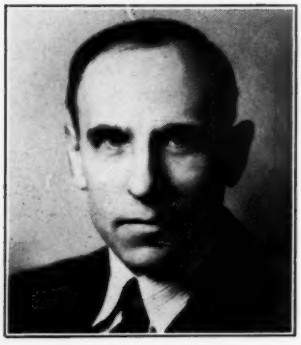
ROBERT E ROSE*
1933-1935



WILLIAM H CADY
1936-1937

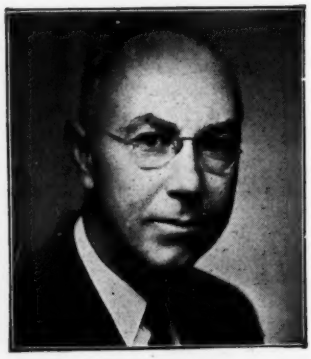


ALBAN EAVENSON
1938-1939



CARL Z DRAVES
1940-1941

THOMAS R SMITH
1942-1943

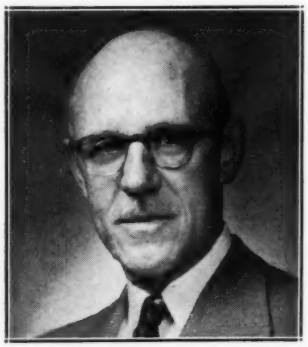


WILLIAM D APPEL
1944-1946

HENRY F HERRMANN
1947-1949

C NORRIS RABOLD
1950-1952

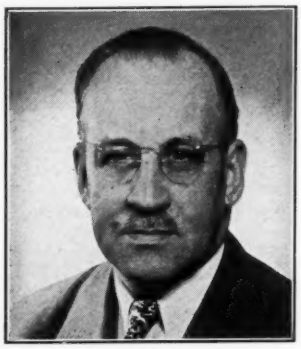
NATIONAL OFFICERS



ARTHUR T BRAINERD
Vice President
(Ciba Company, Inc)

ARTHUR W ETCHELLS
Vice President
(Hellwig Dyeing Corp)

SAMUEL L HAYES
Vice President
(Ciba Company, Inc)



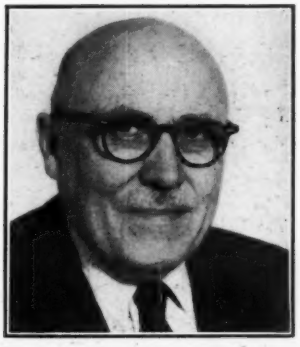
GEORGE O LINBERG
Vice President
(Synthron, Inc)

HAROLD C CHAPIN
Secretary
(A A T C C)

ALBERT E SAMPSON
Acting Treasurer
(National Aniline Division)

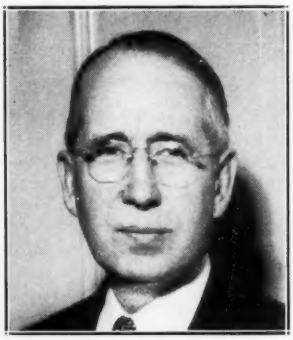
CHARLES W DORN
Chairman, Technical Committee on Research
(J C Penney Co)

HAROLD W STEIGLER
Director of Research
(A A T C C)



LEONARD S LITTLE
Chairman, Executive Committee on Research
(Consultant)

GEORGE H SCHULER
Chairman, Publicity Committee
(E I du Pont de Nemours & Co, Inc)



KENNETH H BARNARD
Chairman, Convention Committee
(Calco Chemical Division)

WILLIAM R MOORHOUSE
Chairman, Appropriations Committee
(National Aniline Division)

GEORGE L BAXTER
Chairman, Corporate Membership Committee
(Bradford Dyeing Association)

PERCIVAL THEEL
Chairman, Publications Committee
(Philadelphia Textile Institute)

ELLIOTT MORRILL
Chairman, Technical Program
(The Best Foods, Inc)

RECEPTION AT THE CONVENTION

Members of the Reception Committee will be stationed at the Information Desk adjacent to the Registration Desk in the lower lobby of the hotel at the entrance to the Exhibition Hall.

A card file will be maintained there, giving names and room numbers of registrants.

Members of the Reception Committee, which is made up of members of all sections as well as of Canada, will wear Red Ribbon Badges. At the Information Desk there will be a supply of pamphlets giving information on restaurants, theatres and other recreations in Chicago. Members of the Committee will be pleased to assist you in making your visit enjoyable and instructive.

SPECIAL EVENTS FOR LADY GUESTS

The Ladies Committee has planned a most interesting program and extends a cordial invitation to the ladies to attend the Convention. Private Dining Room 4 on the third floor of the hotel has been reserved as the ladies' headquarters and committee members will be in attendance there during the Convention. Books of tickets for the various events will be available at the Convention Registration Desk. Due to the low charge for these books, tickets for individual events will not be sold. The cost of transportation to and from the various events is included in the price of tickets.

VISIT TO AIL

The American Institute of Laundering, Joliet, Illinois, has extended an invitation to those attending the Convention to come by special bus to the Institute as their guests. The date is Wednesday, September 16, the day BEFORE the official opening of the Convention. Attendance is limited to 150.

ALUMNI LUNCHEON AND STUDENT CONTEST

The annual Alumni Luncheon will be held at noon Thursday in the Grand Ballroom of the Conrad Hilton. The Student Paper Contest will be held in conjunction with this event and two papers will be presented: one by Lonnie T Howard of Clemson and the other by James Polito of Fairleigh-Dickinson. Tables for alumni of all textile schools will be reserved and marked.

HEADQUARTER LOCATIONS AT CONRAD HILTON

Headquarters will be maintained at the Conrad Hilton for various convention functions as follows:

Ladies—Private Dining Room 4
Press—Private Dining Room 8
Personnel Service—Private Dining Rooms 9 and 10
Registration—Exhibition Hall Lobby
Reception—Adjacent to Registration
Exhibition—Exhibition Hall

National Convention Committee

KENNETH H BARNARD, *Chairman*
American Cyanamid Company

Eric W Camp
National Aniline Division

Walter F Fancourt, III
W F Fancourt & Co

Samuel L Hayes
Ciba Company, Inc

Raymond W Jacoby
Ciba Company, Inc

C Russell Gill
Southern Sizing Co

Joseph H Jones
Phoenix Dye Works

Patrick J Kennedy
E I du Pont de Nemours & Co, Inc

George O Linberg
Synthron, Inc

National Technical Program Committee

ELLIOTT MORRILL, *Chairman*
The Best Foods, Inc

Kenneth H Barnard
American Cyanamid Company

Herman Boxser
Acadia Synthetic Products Division

Miles A Dahlen
E I du Pont de Nemours & Co, Inc

Frederic Dannerth
Industrial Research Chemist

S Jack Davis
The Chemstrand Corp

Arthur W Etchells
Hellwig Dyeing Corp

Herman E Hager
General Dyestuff Corp

V B Holland
Cannon Mills Co

William A Holst, Jr
National Aniline Division

Raymond W Jacoby
Ciba Company, Inc

Ernest R Kaswell
Fabric Research Labs, Inc

Alden D Nute
American Cyanamid Company

W George Parks
University of Rhode Island

Sumner H Williams
General Dyestuff Corp

National Student Contest Committee

ARTHUR T BRAINERD, *Chairman*
Ciba Company, Inc

Arthur W Etchells
Hellwig Dyeing Corp

George O Linberg
Synthron, Inc

M M McCann
Warwick Chemical Co

MID-WEST EXECUTIVE COMMITTEE

JOSEPH H JONES
Vice Chairman
Chairman, Hotel

Chairman

ERIC W CAMP
National Aniline Division
Allied Chemical & Dye Corp

Vice Chairman

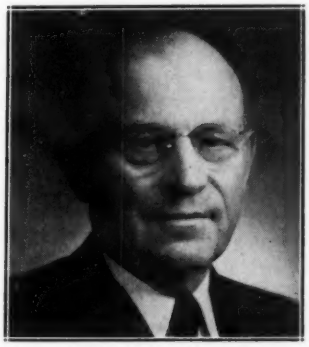
JOSEPH H JONES
Phoenix Dye Works

Transportation

L B MacFARLAND, *Chairman*
American Aniline Products, Inc.

Clifford W Jones
Scholler Bros, Inc

Frank S Stover
American Aniline Products, Inc



L B MacFARLAND
Chairman, Transportation

Entertainment

GEORGE B CHABOT, JR, *Chairman*
Calco Chemical Division
American Cyanamid Company

Archie G Alexander
Arkansas Co, Inc

Paul D'Amour
Mid West Processors, Inc

Kenneth M Harms
Morgan Dyeing & Bleaching Co

Arthur E Mitchell
Sandoz Chemical Works, Inc

Richard R Waski
Calco Chemical Division
American Cyanamid Company

Ladies

WILLIAM BOYD, JR, *Chairman*
Ciba Company, Inc

Raymond E Nelson
Oscar Heineman Corp

Mrs A G Alexander
Mrs William Boyd
Mrs E W Camp
Mrs G B Chabot
Mrs C M Clevenger
Mrs C W Jones
Mrs S Klein
Miss E Lindquist
Mrs F F Myers
Mrs R E Nelson
Mrs A J Olson
Mrs A P Roy

Hotel Reservations

JOSEPH H JONES, *Chairman*

Emil Bonardi
Western Piece Dyers & Finishers, Inc

F Harry Proudfoot
Nyanza Color & Chemical Co

F Earl Schroeder
Prospect Chemical Co

Charles H Sillin
E L Mansure Co

Registration

ERWIN J SINDT, *Chairman*
National Aniline Division
Allied Chemical & Dye Corp

Andrew F Blackburn
Western Felt Works

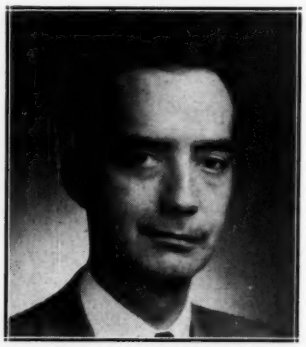
Earl W Hazekamp
General Dyestuff Corp

Robert B Lueg
National Aniline Division
Allied Chemical & Dye Corp

Eugene Miller
National Aniline Division
Allied Chemical & Dye Corp

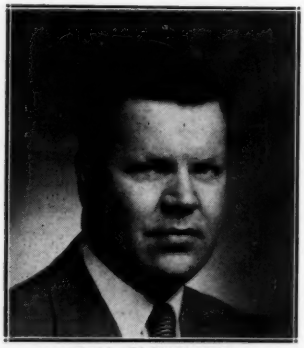
James E O'Malley
Jacques Wolf & Co

GEORGE B CHABOT, JR
Chairman, Entertainment



WILLIAM BOYD, JR
Chairman, Ladies

ERWIN J SINDT
Chairman, Registration



C M CLEVENGER
Chairman, Reception

William D Paine
General Dyestuff Corp

William G Paul
E F Drew & Co

Arthur C Teichner
Almore Dyehouse, Inc

Reception

C M CLEVENGER, *Chairman*
Rohm & Haas Co, Inc

Mid-West Section

Wallace Adler
Erie Dyeing & Processing Co

F H Ahl, Jr
E I du Pont de Nemours & Co, Inc

Arthur A Coleman
Ciba Company, Inc

Raymond M Haas
Wade, Wenger & Associates

Louis Hoehn, Jr
Nyanza Color & Chemical Co

W Kelly Howze, Jr
Indianapolis Bleaching Co

Harold J Krantz, Jr
Reliance Dyeing & Finishing Corp

Peter Meeuwsen
Modern Globe, Inc

Laurence M Miller
Armour Co

John Nerl
American Aniline Products, Inc

Walter S Paddock
National Aniline Division
Allied Chemical & Dye Corp

Robert J Purdy
Orr Felt & Blanket Co

Alexander P Roy
American & Efird Mills, Inc

Lawrence E Schall
Toledo Dye Works Division
Textileather Corp

William P Welch
Ohio Falls, Inc

New York Section

Paul J Luck

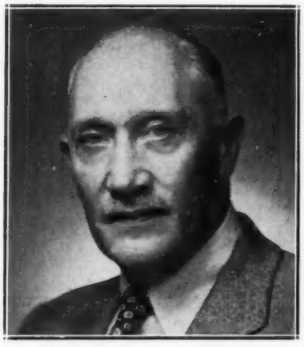
Weldon G Helmus
Fair Lawn Finishing Co

Philadelphia Section

Edward C Diehl
Ankokas Dyeing & Processing Co

Albert P March
Smith, Drum & Co

SAMUEL KLEIN
Chairman, Exhibits



J GORDON STOTT
Chairman, Printing

VICTOR C BRAUN
Chairman, Finance

FRANK F MYERS
Chairman, Dining

JACK G KELLEY
Chairman, Publicity

ELMER F SMITH
Advisor

Western New England Section

Nathaniel J Glade
American Cyanamid Company

Albert H Rant
Laurel Soap Mfg Co

Rhode Island Section

Edward J Allard
National Aniline Division
Allied Chemical & Dye Corp

Raymond B Taylorson
Verona Dyestuffs

Washington Section

Louis R Mizell
Harris Research Laboratories

Leonard Smith
National Cotton Council of America

South Central Section

John O Sweitzer
Scholler Bros, Inc

Northern New England Section
Hudson-Mohawk Section
Piedmont Section
Southeastern Section
Pacific Northwest Section
Pacific Southwest Section

Canada

Norman G Koehler
Geigy Company, Inc

Harry Peers
National Aniline & Chemical Co, Ltd

Exhibits

SAMUEL KLEIN, *Chairman*
Calco Chemical Division
American Cyanamid Company

Francis J Connolly
Morgan Dyeing & Bleaching Co

Sylvester V Cottrell
National Aniline Division
Allied Chemical & Dye Corp

Kenneth J Giese
Chippewa Falls Woolen Co

John A Turner
E I du Pont de Nemours & Co, Inc

Printing

J GORDON STOTT, *Chairman*
Ciba Company, Inc

David A Anderson
Phoenix Trimming Co

Leslie O Meyer
Phoenix Dye Works

Walter H Sites
Ciba Company, Inc

Finance

VICTOR C BRAUN, *Chairman*
Western Piece Dyers & Finishers

H Thompson Latham
E I du Pont de Nemours & Co, Inc

Victor H Lawrence
Geigy Company, Inc

Technical

ELLIOTT MORRILL, *Chairman*
The Best Foods, Inc

Arthur J Andrews
Keystone Aniline & Chemical Co, Inc

Leonard J Armstrong
The Harshaw Chemical Co

J A Bjorksten
Bjorksten Research Laboratories

Harry W Ericson
American Aniline Products, Inc

Meyer Fleischmann
Real Silk Hosiery Mills, Inc

Thomas Heginbotham

(Concluded on Page P589)

Your Host ———

The Mid-West Section

ARTHUR T BRAINERD

IN acting for the third time as host for the National Convention of the AATCC, the Mid-West Section extends greetings to you who have been attending the Conventions for many years and also to newcomers who may perhaps be visiting Chicago for the first time.

Rather than present to you a list of names and dates, we would like to share with you a chronological outline of activities, perhaps rather typically Mid-Western, over the past quarter of a century.

At our meeting at the Bismarck Hotel in Chicago on February 14, 1953, Chairman Olson requested Elmer F Smith to act as Toastmaster and to prepare the program in honor of our Past Chairmen. Following are Mr. Smith's remarks, to which nine Past Chairmen made responses when called:

Remarks by
ELMER F SMITH

1928

The Mid-West Section was constituted in the Fall of 1928. Elvin H Killhefer, National President of the AATCC, came to Chicago and officiated at the organization meeting held in the Bismarck Hotel. According to memory, there were about 60 persons present who were eligible and indicated a desire to become Charter Members of the Section.

To give you a better perspective as to time, 1928 was the year in which Herbert Hoover was elected President of the United States. The New York Yankees also won the World Series of that year, and this is the last time I will refer to that accomplishment as a time mark, as it is entirely too repetitious. In 1929 a meeting was held and the Section elected its first Sectional Chairman.

1929-30

October 25, 1929, the stock market crash occurred on Black Friday—the slump in values amounting to $14,000,000,000 within the next four days. Also in 1929 the New York *Evening Sun* invited the members of its All American Football Team to a dinner in New York. Only 10 men showed up, which in this case was the correct number as Bronko Nagurski made the same team twice—he was chosen as both All American Fullback and Tackle. 1930 was the year in which Bobby Jones won his Grand Slam at Golf.

Your first Chairman served during the years 1929-1930, and we are happy that Carl E Bick could be present this evening.

1931

September 18th the Japanese started their first serious aggression by seizing Mukden, Manchuria, which ultimately led to their taking over that part of China north of the Great Wall. September 21st Great Britain abandoned the Gold Sandard. Knute Rockne was killed in an airplane accident.

Edward T Morgan was elected and served as Chairman during that year. As a mark of our respect to his unfortunate passing, let us stand, with heads bowed, for a moment.

Perhaps we should call on Clarence Wille, who was Secretary during Mr Morgan's year as Chairman, as Ed generally had some very important business to attend to about the time our meetings should start and Clarence was really Ed's Man Friday.

1932

On November 8th Franklin D Roosevelt was first elected President of the United States, with 467 to 64 electoral votes. This was the year the Cubs played the Yankees in the World Series. In the third game, played at Chicago, Babe Ruth had two called strikes on him, then pointed to center field fence and that was the obstacle over which the next thrown ball disappeared.

Because the first National AATCC Convention to be held in Chicago was scheduled for 1933, Mr Bick was re-elected Chairman in the Fall of 1932 and served during 1933.

1933

Hitler became Chancelor of Germany. President Roosevelt ordered a four-day bank holiday. The Prohibition law expired December 6th, after 13 years, 10 months and 18 days, which greatly reduced the wear and tear on hip pockets.

The first National AATCC Convention was held in Chicago. On July 6th the All-Star Baseball game between the two Major Leagues was first played in Comiskey Park. The American League won, 4 to 2.

Eric F Hempel was elected Chairman of the Section and served with distinction. As a mark of our respect, let us stand with bowed head for a moment, as Eric passed on a couple of years ago. I was Secretary of the Section during Eric's term of office, and can testify to his wanting to do his best always to promote the interests of the Section.

1934-35

President Von Hindenburg of Germany died and Hitler assumed the Presidency. Italians invaded Ethiopia. On May 25, 1935, Jesse Owens broke five world track records and tied a sixth at a track meet at Ann Arbor.

Your elected Chairman for these two years was Arthur T Brainerd, and I know you will want to pay him honor for this, as well as for his continuous work in behalf of the Section.

1936-37

Hitler's troops made their first aggressive move by re-occupying the Rhineland. Edward VIII renounced the British throne. Amelia Earhart's around-the-world plane was lost after last being reported at Lae, New Guinea. The University of Minnesota, under Bernie Bierman, was voted the National College Football Championship. Joe Louis won the World Heavyweight title from Jim Braddock.

Your Chairman for these two years maintained the pace set by his predecessors and the Section continued to grow. I know you will want to honor Edward J Siegrist.

1938-39

Nazis seized Austria after a Hitler ultimatum. Mr Chamberlain, Premier of Great Britain, took his umbrella to Munich and agreement was reached to permit Germany to occupy the Sudetan area of Czechoslovakia. Germany and Russia signed a 10 year nonaggression pact. On September 1, 1939, World War II began when the German Army attacked Poland. Eddie Arcaro won his first Kentucky Derby, riding Lawrin. The National Baseball Museum and Hall of Fame at Cooperstown, N Y, opened its doors to enshrine forever 13 baseball immortals who were: Ty Cobb, Hans Wagner, Grover Alexander, Tris Speaker, Napoleon Lajoie, George Sisler, Walter Johnson, Eddie Collins, Babe Ruth, Connie Mack, Cy Young, Wee Willie Keeler and Christy Mathewson.

Your Chairman for 1938 and 1939 stepped up our technical program and did a fine job for the Section. I know you will want to pay your compliments to Herman Boxser.

1940-41

Germany put an end to the so-called phoney war and overran Flanders and Northeastern France. The Dunkerque evacuation followed. June 22 1941, Hitler began war on Russia. On Sunday, December 7th, 1941, Japan attacked the United States Fleet at Pearl Harbor and the United States entered World War II. In 1941 Whirlaway won the Kentucky Derby in the best time in which it has ever been run—2 minutes, 1-2/5 seconds. This was #2 for Eddie Arcaro. Leftie Grove finished his baseball career with an even 300 victories. His record over the years on a won-lost percentage basis was 68 per cent.

For your Sectional Chairman for the 1940-41 period, you chose a very energetic young man, and I know you will be glad to pay your respects to Archie G Alexander.

1942-43

On Saturday, November 7, 1942, American Forces landed in French Africa under the command of Lt Gen Dwight D Eisenhower. On September 8, 1943, with North Africa cleared of the enemy, Sicily taken and Italy invaded, Italy surrendered. During 1942 Cornelius Warnerdam set the present world record in the pole vault at 15 feet, 8½ inches. In 1943 Notre Dame was declared National Collegiate Football Champions, scoring 340 points to their opponents 69 in 10 games.

For the years 1942-1943 you elected as Chairman of the Section Virgil T Hartquist, who did a fine job during his term of office. Mr Hartquist found greater opportunities for his abilities with a Philadelphia company, and while we in this Section are very glad that this opportunity came Virgil's way for his material advancement, we were indeed very sorry to lose him as a member of this Section.

1944-47

On Tuesday, June 6, 1944, the Allied Armies landed in France on the Cherbourg Peninsula. On April 12, 1945, President Roosevelt died and Harry S Truman took over. May 7 1945, Germany surrendered unconditionally. August 6, 1945, the first atomic bomb was dropped on Hiroshima, Japan. On August 14, 1945, Japan surrendered unconditionally. August 15, 1947, India and Pakistan became independent nations.

1944. This was the year when Doc Blanchard and Glen Davis were Mr Inside and Mr Outside, respectively, for the Army football team and mowed them all down.

1947. Second National AATCC Convention was held in Chicago. (Elmer Smith was General Chairman. Ed.) In this year, the first football game of the Rose Bowl pact between the Western Conference and the Pacific Conference resulted in an Illinois victory over UCLA, 45 to 14.

Due to confusion of the National AATCC in twice postponing the year in which the Mid-West Section were to be hosts for the National Convention, your Chairman originally elected in 1944, held over the four years as Chairman of the Section due to his familiarity with the Convention arrangements. Al J Feit, therefore, had a long and arduous term of office, for which I know that you will want to pay your respects for a job well done.

1948-49

On February 25th, 1948, the Communists took over after a coup in Czechoslovakia and in 1949 the Chinese Communists won China as the United States support was withdrawn from the Chiang Kai-Shek National Government. In 1948, Citation, who became the greatest money winner of all times, won the Kentucky Derby. This was Arcaro's 4th win.

For the 1948-1949 period, you elected Joseph H Jones as your Chairman. Joe proved to be a very able executive and arranged for some of our most instructive meetings. We understand that Joe is vacationing grandly in Cuba, and we are sorry his vacation comes at this period when we are honoring our past Chairmen but, for the records, I feel that a nice round of applause is due Joe Jones, who is also very ably serving as one of our Sectional Councilors.

1950

On June 27th, 1950, the Korean war began. December 19th, General of the Army Dwight D Eisenhower, was appointed as Supreme Commander of an International Army to defend Western Europe.

At this point my encyclopedia on sports ran out and I could not think of a more auspicious sporting event than that of Bob Anderson winning the mill men's trophy at Lake Lawn with some such ridiculous score as 73.

For the year 1950, you elected Elliott Morrill as Chairman and Elliott did the usual bang-up job, as is to be expected on any Association matters entrusted to his care.

1951-52

On April 11th, 1951, President Truman relieved General MacArthur of all his commands in the Far East. In 1952, after a 20 years' drought, the Republican party was returned to National power in the election of President Eisenhower. In 1951, in the play-off for the National League championship between the New York Giants and the Brooklyn Dodgers, Bobby Thomson hit a homer in the 9th inning of the deciding game to win for New York. In 1952 Bob Mathias shattered the world record in rolling up 7,887 points in the Olympic Decathlon at Helsinki.

Although Alfred J Olson is your present Sectional Chairman, I believe he may also be considered as one of the Past Chairmen as he served you as such during the preceding year. We don't have to be brief as to the time and whys and wherefores to recognize that Al has done and is doing a fine job, and I know that you will want to pay him honors justly due.

* * * * *

In honoring the Past Chairmen of the Mid-West Section, necessity has called upon us for a while to reminisce and recall the acts and glories of the past 25 years. On such an occasion, this is as it should be.

Exhibitors

THERE will be 49 exhibitors occupying 86 booths for display in the large, air-conditioned Exhibition Hall of the Conrad Hilton. The latest developments by dyestuff, chemical and resin, laboratory equipment, machinery and instrument manufacturers will be on display. New fibers and fabrics will also be shown. Altogether the Exhibition will proclaim why the slogan "American Achievement Today Challenges Comparison" was chosen.

The exhibition hours will be as follows:

Thursday, Sept 17—10 am to 10 pm

Friday, Sept 18—10 am to 10 pm

Saturday, Sept 19—10 am to 2 pm

There follows an alphabetical list of exhibitors with booth numbers and on succeeding pages are a diagram of the exhibit area and descriptions of the individual exhibits.

Exhibitor	*Booth Space*
AATCC National Intersectional Contest Committee	54-56
AATCC Research Committee	61-63, 67-73
American Aniline Products, Inc	89-90
American Bemberg Corp	95
American Dyestuff Reporter	109
American Optical Co, Instrument Division	53
America's Textile Reporter	88
Anderson Machine Shop, Inc	136
Atlas Electric Devices	59-60
Bersworth Chemical Co	77-78
Brush Electronics Co	125-126
Calco Chemical Div, American Cyanamid Co	123-124
Carbide & Carbon Chemicals Co, A Division of Union Carbide and Carbon Corp	119
Ciba Co, Inc	79-80
Custom Scientific Instrument Co	66
Daily News Record	110
Dow Corning Corp	83
E F Drew & Co	101
Dyestuff Div, E I du Pont de Nemours & Co, Inc	96-98
Encyclopedia Britannica	111
Gaston County Dyeing Machine Co	86
Geigy Co, Inc	93-94
General Dyestuff Corp	74-76
General Plastics Corp	103
Glyco Products Co, Inc	108
B F Goodwich Chemical Co	102
Hilton-Davis Chemical Co, A Division of Sterling Drug Inc	91-92
E F Houghton & Co	135
International Salt Co	104
Modern Textiles	130
Monsanto Chemical Co	131-132
Morton Salt Co	81-82
National Aniline Div, Allied Chemical & Dye Corp	112-114
Nopco Chemical Co	128-129
Owens Corning Fiberglas Corp	99-100
Pittsburgh Coke & Chemical Co	142-144
Riggs & Lombard, Inc	57-58
Sandoz Chemical Works, Inc	120-121
Scholler Bros Inc	122
Scientific Oil Compounding Co	116-117
Seydell-Woolley & Co	87
Textile Age, Inc	115
Textile Bulletin	137
Textile Industries	133
Textile World	107
United States Testing Co, Inc	140-141
Victor Chemical Works	105-106
Virginia-Carolina Chemical Corp	138-139
Jacques Wolf & Co	85

EXHIBIT AREA

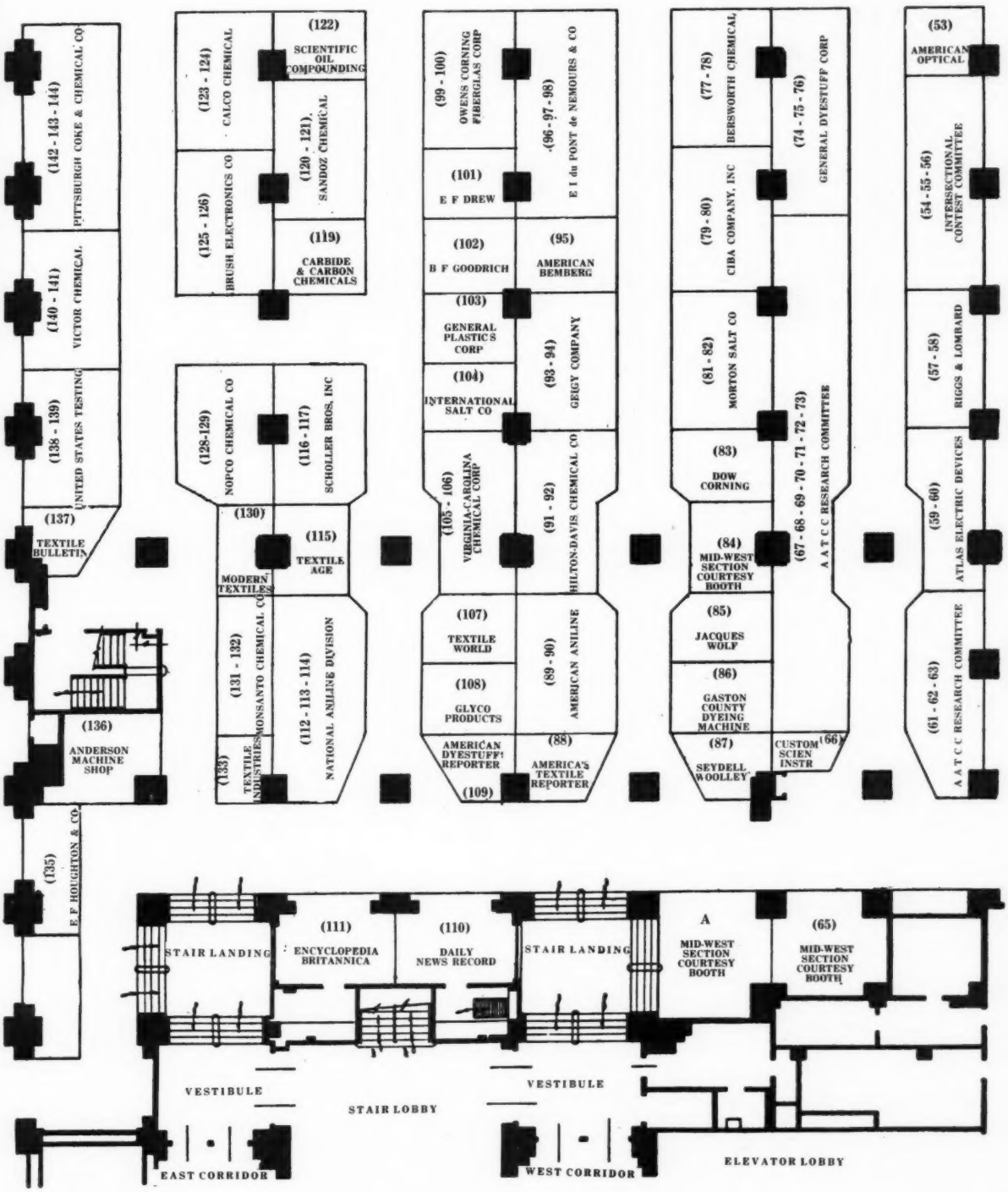

(142 - 143 - 144) PITTSBURGH COKE & CHEMICAL CO
(140 - 141) VICTOR CHEMICAL
(138 - 139) UNITED STATES TESTING
(137) TEXTILE BULLETIN
(136) ANDERSON MACHINE SHOP
(135) E F HOUGHTON & CO
(123 - 124) CALCO CHEMICAL
(125 - 126) BRUSH ELECTRONICS CO
(122) SCIENTIFIC OIL COMPOUNDING
(120 - 121) SANDOZ CHEMICAL
(119) CARBIDE & CARBON CHEMICALS
(128-129) NOPCO CHEMICAL CO
(116 - 117) SCHOLLER BROS, INC
(130) MODERN TEXTILES
(115) TEXTILE AGE
(131 - 132) MONSANTO CHEMICAL CO
(112 - 113 - 114) NATIONAL ANILINE DIVISION
(133) TEXTILE INDUSTRIES
(99 - 100) OWENS CORNING FIBERGLAS CORP
(101) E F DREW
(102) B F GOODRICH
(103) GENERAL PLASTICS CORP
(104) INTERNATIONAL SALT CO
(105 - 106) VIRGINIA-CAROLINA CHEMICAL CORP
(96 - 97 - 98) E I du PONT de NEMOURS & CO
(95) AMERICAN BEMBERG
(93 - 94) GEIGY COMPANY
(91 - 92) HILTON-DAVIS CHEMICAL CO
(107) TEXTILE WORLD
(108) GLYCO PRODUCTS
(89 - 90) AMERICAN ANILINE
AMERICAN DYESTUFF REPORTER
(109)
(88) AMERICA'S TEXTILE REPORTER
(77 - 78) BERSWORTH CHEMICAL
(79 - 80) CIBA COMPANY, INC
(81 - 82) MORTON SALT CO
(83) DOW CORNING
(84) MID-WEST SECTION COURTESY BOOTH
(85) JACQUES WOLF
(86) GASTON COUNTY DYEING MACHINE
(87) SEYDELL WOOLLEY
(74 - 75 - 76) GENERAL DYESTUFF CORP
(67 - 68 - 69 - 70 - 71 - 72 - 73) A A T C C RESEARCH COMMITTEE
(66) CUSTOM SCIEN INSTR
(53) AMERICAN OPTICAL
(54 - 55 - 56) INTERSECTIONAL CONTEST COMMITTEE
(57 - 58) RIGGS & LOMBARD
(59 - 60) ATLAS ELECTRIC DEVICES
(61 - 62 - 63) A A T C C RESEARCH COMMITTEE
STAIR LANDING
(111) ENCYCLOPEDIA BRITANNICA
(110) DAILY NEWS RECORD
STAIR LANDING
A
MID-WEST SECTION COURTESY BOOTH
(65) MID-WEST SECTION COURTESY BOOTH
VESTIBULE
STAIR LOBBY
VESTIBULE
EAST CORRIDOR
WEST CORRIDOR
ELEVATOR LOBBY

EXHIBIT DESCRIPTIONS

American Aniline Products, Inc

50 Union Square, New York 3, N Y
Booths 89-90

On Display: the complete line of AAP dyestuffs and textile specialties featuring Amanthrene superior vat colors.

In attendance: R N Armour, vice president; J J Marshall, manager, domestic sales; E F Smith, manager, Chicago Branch; J H Orr, manager, Charlotte Branch; J T Bohannon, Jr, manager, Chattanooga Branch; E K Bush, manager, New England Branch; R W Brewer, manager, Paterson branch.

AATCC Intersectional Contest Committee

Booths 54-56

American Association of Textile Chemists and Colorists Research Laboratories

Lowell, Mass
Booths 61-63, 67-73

On display: (Flammability)—AATCC test apparatus, California model tester (experimental); (Fastness of Dyed Acetate to Atmospheric Oxides of Nitrogen)—new accelerated test method; (Accelerotor)—wet and dry abrasion testing, colorfastness to laundering (accelerated test); (Lightfastness)—Atlas Fade-Ometer, Atlas Daylight Test Chamber; (Washfastness)—Atlas Launder-Ometer, steel tubes for accelerated laundering tests in the Launder-Ometer; (Shrinkage Resistance)—commercial vs home laundering; (Perspiration Fastness)—Perspirometer.

In attendance: H W Stiegler, AATCC director of research; G J Mandikos and H E Glidden, research associates; E P Johnstone, technical manager; G R Thompson, administrative manager.

American Bemberg Corporation

261 Fifth Avenue, New York 16, N Y
Booth 95

On display: all types of fabrics made from Bemberg Nubbi and slubby yarns; fabrics made in combination with other yarns.

In attendance: James C Fortune, advertising and sales manager; William Six, technical director; E H Benzing, chemical director.

American Dyestuff Reporter

44 East 23rd Street, New York 10, N Y
Booth 109

On display: the official organ of the American Association of Textile Chemists and Colorists.

In attendance: James A Doyle, Norman A Johnson, Myron D Reeser, Herbert A Stauderman, Charles A Whitehead.

American Optical Company Instrument Division

Buffalo 15, N Y
Booth 53

On display: the AO Rapid Scanning Spectrophotometer complete with reflection attachment; the #662D Photomicrographic Camera equipped with focusing telescope, 4" x 5" and 35 mm camera backs; the P45 Polarizing Microscope; 8QLSN Phase Microscope; 25LG Stereoscopic Microscope; and a Refractometer for convenience determination of refractive indices of liquids and solids.

In attendance: E V Finnegan and Paul Piret.

America's Textile Reporter

286 Congress Street, Boston, Mass
Booth 88

Trade publication.

Anderson Machine Shop Inc

Brook Road, Needham Heights 94, Mass
Booth 136

On display: the Pacific Evenness Tester for testing the unevenness of yarn, roving and sliver; the Pacific Integrator, used in conjunction with the Pacific Evenness Tester to obtain the figures for standard deviation, coefficient of variation and the mean thickness of the material being tested.

In attendance: A G Anderson, sales manager.

Atlas Electric Devices Company Inc

351 West Superior Street, Chicago 10, Ill
Booths 59-60

On display: Fade-Ometer and the new Model DE-1 Outdoor Exposure Cabinet (for lightfastness testing); the Launder-Ometer and the metal specimen containers called for in the new accelerated washfastness tests; the Accelerotor for wet and dry abrasion testing; and the Scorch Tester for chlorine retention testing.

In attendance: John W Lane, president; J E Norton, director, res and dev; B J Alport and R M Metzinger, engineers; and L J Schrachta, sales manager.

Bersworth Chemical Company

875 Waverly Street, Framingham, Mass
Booths 77-78

Brush Electronics Company An operating unit of Clevite Corporation

3405 Perkins Avenue, Cleveland 14, Ohio
Booths 125-126

On display: Brush Uniformity Analyzer for measuring irregularities in weight per unit length of yarn, roving and sliver; Hypersonic Generator and Transducer.

In attendance: A J Walcutt, D Gaskill, A Ondis.

Calco Chemical Division American Cyanamid Company

Bound Brook, N J
Booths 123-124

On display: famous miniature models, hand-made and costumed under the direction of Margot Nilsen at her Connecticut studios, will serve in the display of Calco's specialized line of fast dyes. (The Nilsen reproductions of figurines representing American presidents' wives was a feature of the New York World's Fair).

In attendance: sales and technical personnel.

Textile Fibers Department Carbide and Carbon Chemicals Company A Division of Union Carbide and Carbon Corporation

30 East 42nd Street, New York 17, N Y
Booth 119

On display: dynel and blends of dynel with wool, cotton, rayon and acetate;

dynel-blend apparel fabrics dyed with new dyestuffs, by new procedures; dynel "inner structures" and techniques to help the dyer.

In attendance: C W Davisson, T A Feild, Jr, R W Gaines, F C King, F C Rippner, C A Setterstrom and A L Snyder, development engineers.

Ciba Company, Inc

627 Greenwich Street, New York 14, N Y

Booths 79-80

On display: Cibalans; Copratines for printing; photographs of the new Toms River Vat Dyestuff Plant.

In attendance: (New York)—W H Kieffer, general sales manager; C J Weidmann, technical director; J P Bauer, Technical Service Division; E D Lind, manager, New York sales; M G Stern, laboratory manager; E P Ward, J G Watson, G L Battye, E L Caswell, F Raff, S N Glarum, technicians. (Montreal)—F Schlaeppi, technician. (Charlotte)—S L Hayes, manager, Charlotte Office; A R Thompson, Jr, salesman; T J Nuckolls, technician. (Boston)— C M Kopatch, manager, Boston Office. (Philadelphia)—C T Anderson, manager, Philadelphia Office. (Providence)—R W Jacoby, manager, Providence Office. (Chicago)—A T Brainerd, manager, Chicago Office; J G Stott, Jr, R D Totten, A A Coleman, W Boyd and W Sites, salesmen; B Fay, laboratory manager.

Custom Scientific Instrument Company

541-543 Devon Street, Arlington, N J

Booth 66

On display: the Low-Pressure Thickness Gauge.

Daily News Record

7 East 12th Street, New York 3, N Y

Booth 110

Trade publication.

Dow Corning Corporation

Midland, Michigan

Booth 83

On display: three of the new DeCetex silicone textile finishes and two silicone defoamers for use in size tubs, dye vats, etc.

The three new finishes, DeCetex 102, DeCetex 104 and DeCetex 108 are all water-soluble emulsions, providing durable water repellency. DeCetex 104 is suited for general application while the others are adaptable to synthetics. Comparison samples of fabrics treated with each will be on display.

Of the defoamers, Antifoam A can be used as received, while Antifoam A Emulsion is more readily dispersed in aqueous foamers.

In attendance: F L Dennett, manager, Fiber Treatment Laboratory; R A Ford, Fiber Treatment Laboratory; R E Knopf, technical sales representative, Atlanta; C E Gibson, technical sales representative, New York.

E F Drew & Company, Inc

15 East 26th Street, New York 10, N Y

Booth 101

On display: new work on antistatic materials and on detergent systems.

In attendance: L W Davis, technical director; W H Kirkpatrick, W G Paul, and J W White, representatives; J P Redston, sales manager; R M Preston, vice-president, Chicago Branch.

E I du Pont de Nemours & Company Inc Dyestuffs Division

Wilmington 98, Del

Booths 96-98

On display: the latest developments in Du Pont dyes in the Latyl line for Dacron polyester fiber and the Capracyl dyes for wool, the Zelec line of durable and non-durable antistatic agents, the new Zelan durable water repellent designed especially for rayons and synthetics, new uses for Zeset fabric stabilizer, and a new detergent, Duponol RA.

In attendance: C H Asbury, L Collins, S R Detrick, C B Harris, G M Markle, P L Meunier, C F Schaumann, O Stallmann, R A Clarke, J F Laucius, W R Remington, R D Sloane, N R Viera, \ F Bailey, W W Pennock, A R Eanzel, P J Kennedy, C T Mentzer, R A Shimp, H F Clapham, G H Schuler, V D Lyon, R J Thomas, A K Saville, A C Bacon, W F Crayton, J H Stradley, J G Kelley, H T Latham, H A Lips, J M Rimson, J E Dempsey, J G Baric, F H Ahl.

Encyclopedia Britannica

14 East Jackson Boulevard, Chicago 4, Illinois

Booth 111

On display: The 1953 Edition of the Encyclopedia Britannica together with accessories and research reports.

In attendance: Josef A Wittchen, director of exhibit promotion.

Gaston County Dyeing Machine Company

Stanley, N C

Booth 86

On display: a laboratory dyeing machine and two 1/10-scale models of the Company's large production units.

In attendance: G H Hacker, vice president and sales manager; Gordon Hacker.

Geigy Company, Inc

89-91 Barclay Street, New York 8, N Y

Booths 93-94

On display: wool piece and package dyeings, nylon and silk dyeings with the Irgalans; additions to the Irgalan range; dyeings on cottons and rayons with the Cuprophenyls and Solophenyls; newest developments in Mitin durable mothproofing.

In attendance: F F Meyers and H A Keenan.

General Dyestuff Corporation

435 Hudson Street, New York 14, N Y

Booths 74-76

On display: an animated representation of the Williams continuous stock dyeing machine and color transparencies illustrating the use of various Antara chemicals in textile wet processing. Also featured will be the latest developments on the dyeing and printing of the newer synthetic fibers and many samples of these new fabrics.

In attendance: H A Horstmann, branch manager, New York Office; H F Herrmann, general market manager, Dyestuffs Division; J R Bonnar, sales manager, Dyestuffs Division; D E Marnon, manager, Dyestuffs Technical Dept; R J Hamilton, advertising manager; P Choquette, research coordinator, Dyestuffs; C Z Draves, editor of technical literature, Dyestuffs Division; H Luttringhaus, in charge, Wool Dept; W M Dewing, branch manager, Boston Office; W A Lord, branch manager, Providence Office; E R Heintz, branch manager, Philadelphia Office; C C Cayce, branch manager, Charlotte Office; E Taylor, in charge, Cotton Dept; J L Eich, branch manager, Chicago Office; C A Bergman, technical manager, textile chemicals, Antara Chemicals Division; E Hansen, asst textile chemicals manager, Antara Chemicals Division; W R Brandt, market manager, textile chemicals, Antara Chemicals Division; H G Shelton, sales manager, Antara Chemicals Division; C E Stevens, manager, Chemicals Technical Dept, Antara Chemicals Division; W Paine and E W Hazekamp, salesmen, Chicago Office.

The General Plastics Corporation

1011 Main Avenue, Clifton, N J

Booth 103

On display: textile machinery coated with Teflon. There will be a demonstration of how Teflon eliminates unwanted adhesion of sizing material and dyestuffs.

In attendance: Robert Goldsmith, Robert Haas and Joseph D Ezechel, Jr.

Glyco Products Company, Inc

26 Court Street, Brooklyn 2, N Y

Booth 108

This exhibit will emphasize the Company's chelating, sequestering and complexing agents, the Tetrines (ethylenediamine tetraacetic acid and its metal salts). The series will include, in addition to Tetrine Acid, the di-, tri- and tetra sodium salts in powdered form and their water solutions. Also featured will be nonionic surface-active agents of the polyhydric alcohol fatty acid type, such as Aldo 33—Glyceryl Monostearate, Diglycol Laurate S, and Polyethylene Glycol 400 Monolaurate; Abopon, a liquid flameproofing agent; and Flameproofing Agent 313.

In attendance: Eugene McCauliffe, vice-president; Jack H Dollinger, sales manager; Berkeley Hathorne; George H Goodyear; Chester F Moculeski; Jack W Daum; Harry H Pact; Edward Schwartz; Sam Cohen.

B F Goodrich Chemical Company

2060 East Ninth Street, Cleveland 15, Ohio

Booth 102

On display: treatment of cotton and rayon with Hycar latex to provide improved wearing properties; Good-rite TS-20 processing size for nylon and acrylic yarns; propiolactone for wool modification; Harmon colors for textile dyeing and printing; Geon Latex for bonding on nonwoven constructions.

In attendance: R C Bascom, technical service manager, Hycar American Rubber; H E Minnerly, product engineer, Hycar American Rubber; T C Culver, sales representative, Hycar American Rubber; L L Shailer, sales representative, general chemicals; W E Manring, product engineer, Geon plastic materials; F F Bingham, sales representative, Harmon colors; S B Twitchell, technical service data; Neil Sherwood.

The Hilton-Davis Chemical Co A Division of Sterling Drug Inc

2235 Langdon Farm Road, Cincinnati 13, Ohio

Booths 91-92

The backdrop, or main section, of the booth is built on three triangular pylons which revolve—each face of the pylon having a different exhibit. The theme of two faces of the exhibit will feature dyestuffs and textiles of the ancients, and the third face will be dyestuffs for the moderns as produced by The Hilton-Davis Chemical Company.

On the ancient textile exhibit will be mounted a rare, gilded, 3000-year old Egyptian mummy mask, and underneath the mask will be shown examples of ancient Egyptian textiles. To the right of the mask will be a large hand-painted mural depicting a Maya Indian woman weaving on an ancient-built loom and a Maya Indian woman spinning. Underneath the mural will be exhibited two rare pieces of textiles—one, a thousand-year old pre-Inca textile poncho excavated from a tomb in Peru, and the other, an exquisite hand-loomed Maya huipil, or blouse, secured on the Knaggs' Maya expedition into Central America in 1950. In addition, various pre-Inca spinning and weaving implements, such as spindles, etc, excavated from a pre-Inca tomb in Peru and dating back to 1000 A D will be displayed.

The second face of the pylon carries the heading "Dyestuffs of the Ancients," under which is an enlarged mural copied from an Egyptian tomb, showing the various steps of Egyptian weaving, spinning, and dyeing of cloth. Underneath this will be six large hand-painted panels depicting plants, animals, and insects from which the ancients secured their dyes. These panels will include Indigo, Madder, Safflower, Saffron, the Tyrian Purple mollusk, and the Cochineal insect.

The third face of the pylon will be an exhibit of nine swatches dyed with the various classes of dyestuffs which Hilton-Davis manufactures. The heading on this will be "Hilton-Davis Offers Dyestuffs for the Moderns."

A booklet entitled "Dyestuffs of the Ancients" and describing these various dyestuffs will be distributed at the booth.

E F Houghton & Company

303 West Lehigh Avenue, Philadelphia 33, Pa

Booth 135

On display: antistatic agents, a cationic softener, surface-active agents, warp size softeners, stock lubricants for woolen and worsteds; and soaking, throwing and conditioning oils for synthetic fibers.

In attendance: C B Kinney, manager, textile sales; Bernard Menin, supervisor, Textile Research Laboratory; J E McLaughlin, Textile Sales Department.

International Salt Company Inc Industrial Division

Scranton, Pa

Booth 104

On display: pictures of five operations—the mines at Retsof, N Y, Detroit, Mich, and Avery Island, La and the evaporating salt plants at Ludlowville and Watkins Glen, N Y. A stainless steel model of the Lixate Rock Salt Dissolver will also be on display along with ISC's new textile dyeing reagent, Sterling TNA-5.

In attendance: S A Nystrom, industrial sales manager, Midwest Division; N M Agnew, Southern development engineer; L J Theilgard, A J Hulsebosch, G N McKeown, and W W Harris, Jr, industrial engineers.

Modern Textiles

303 Fifth Avenue, New York 16, N Y

Booth 130

Trade publication.

Monsanto Chemical Company

1700 South Second Street, St Louis 4, Mo

Booths 131-132

Morton Salt Company

120 South La Salle Street, Chicago 3, Ill

Booths 81-82

On display: the Morton Brinemaker Model E, for use with Morton Evaporated Salt; the Model ER, for use with Morton Rock Salt; and the Model SD, for use with Morton Southern Rock Salt. There will also be new literature on brine and brinemaking available.

In attendance: T E Driskell, Ernest Peters, Jr, D M Heath, H A Turner, C J Nadherny, E R Ravenel, John Drake, J M Culp, and A C Dewey.

National Aniline Division Allied Chemical & Dye Corporation

40 Rector Street, New York 6, N Y

Booths 112-114

On display: National Aniline will present a motion display of dyeings and printings using their dyestuffs on cotton, wool and synthetics plus scene-in-action displays of Nacconol synthetic detergent uses in wet-processing.

In attendance: executive, plant and technical personnel as well as representatives from principal National Aniline branch offices.

Nopco Chemical Company

Harrison, N J

Booths 128-129

On display: Nopcosize N nylon warp size, Nopco 1425-B dye levelling and stripping aid; Nopcotex Y synthetics and wool softeners Nopco 2105-C cotton and rayon dye levelling softener, Nopcostat 2125-P processing lubricant for Dacron and Orlon fibers, Nopco 1656-P worsted fiber processing lubricant, Nopcones (antistatic-detergent coning oils) and Nopco-

wets (foaming and nonfoaming wetting and rewetting agents).

In attendance: Edwin A Robinson, vice president; Ralph G Schaubhut, chief chemist, Textile Chemicals Division; John N Gammon, Southern District sales manager; Lawrence E Rossiter, New England District sales manager; Walter E Brewer, Eastern District sales manager; Travis V Rankin, Central District sales manager; R Bert Macintyre, North Carolina sales representative; Robert F McClellan, Midwest District sales manager; Daniel S Rion, Southern sales representative; Richard F Spain, Chicago sales representative; Emily A Taylor, advertising manager; Paul DeSerio, advertising assistant.

Owens Corning Fiberglas Corp

16 East 56th Street, New York, N Y
Booths 99-100

Pittsburgh Coke & Chemical Company

Neville Island, Pittsburgh 25, Pa
Booths 142-144

On display: dyestuffs produced by the Company (the "Coal to Color Story"); a laboratory Bond machine in operation.

In attendance: R M Locke, sales manager; L D Barrick, Division manager; K C Ruppenthal, technical supervisor; A E Medas, chief colorist; R Jenkins, textile chemist and colorist; B C Bond, sales supervisor; W O Neeb, S W Freeman and E A Zillessen, salesmen.

Riggs & Lombard, Inc

750 Suffolk Street, Lowell, Mass
Booths 57-58

On display: stainless steel "Hy-Temperature" stock dye kettle for synthetic and wool fibers.

In attendance: J W Malloy, clerk & sales manager; A R Breen, Chicago representative.

Sandoz Chemical Works, Inc

61-63 Van Dam Street, New York 13, N Y
Booths 120-121

On display: the latest in the Company's dyestuffs and textile chemicals.

In attendance: A A Barker, Cincinnati Branch manager; A E Mitchell; R Y McCarter; A T Hanes, Charlotte Branch manager; C H A Schmitt, director of research and development.

Scientific Oil Compounding Company, Inc

1637-55 South Kilbourn Avenue, Chicago 23, Ill
Booth 122

On display: methods for preserving textiles against mildew and bacteria.

In attendance: Gerald Eisenschiml, president; Ralph Eisenschiml, vice president; C C Yeager, technical director; Edwin Balsley, sales manager; Seymour Goldfarb, technical sales.

Scholler Brothers, Inc

Collins and Westmoreland Streets,
Philadelphia 34, Pa
Booths 116-117

On display: samples of soaps, scouring agents and finishes manufactured by the Company, as well as fabrics treated with same.

In attendance: C W Jones, L M Boyd, J O Sweitzer, J F Noble, and E S Atkinson.

Seydel-Woolley & Company

748 Rice Street, N W, Atlanta, Ga
Booth 87

On display: textile chemicals.

In attendance: Paul Seydel, vice-president; David Meriwether, sales magr, Finishing Division; R P Anthony, technical representative; Carl Blumenstein, chief chemist.

Textile Age, Inc

22 West Putnam Avenue, Greenwich, Conn
Booth 115

Trade publication.

Textile Bulletin

218 West Moorhead Street, Charlotte, N C
Booth 137

Trade publication.

Textile Industries

806 Peachtree Street, N E, Atlanta 5, Ga
Booth 133

Trade publication.

Textile World

330 West 42nd Street, New York 36, N Y
Booth 107

Trade publication.

United States Testing Company Inc

1415 Park Avenue, Hoboken, N J
Booths 133-139

On display: testing instruments, including the Electrostatic Tester, which was recently developed for comparing electrostatic characteristics of fabrics; the Pilling Tester, used to measure pilling characteristics of fabrics; and the Low-Temperature Impact Tester, for measuring the effect of impact on vinyl film that has been subjected to low temperatures. In addition to instruments and testing apparatus, literature will be available describing the services and scope of the Company, particularly for the Midwestern textile industry through their laboratory facilities in Chicago.

In attendance: T V Weber, Chicago District sales manager, and other personnel from the Chicago branch.

Victor Chemical Works

141 West Jackson Boulevard, Chicago 4, Ill
Booths 140-141

On display: phosphates, formates and oxalates; stabilizers, surface-active compounds; flameproofing and waterproofing chemicals; samples of woolen fabrics dyed by the new process using diammonium phosphate.

In attendance: D G Brower, director, Special Products Division; G M Cote, textile specialist, New York Office; C E Zackrison, sales representative, New York Office; R F Cotten, New York manager; R P Gates and E H Callies, Jr, Special Products Division; L A Kramer, Technical Service Department; W E Coleman, Research Laboratories; M C Kuzman, Sales Department; M R Stanley, director of sales.

Virginia-Carolina Chemical Corporation Fiber Division

500 Fifth Avenue, New York, N Y
Booths 105-106

On display: a series of fabrics and end-products made from Vicara, as well as the raw fiber. The display will be composed of three custom-built units—mannikins, etc.

In attendance: Jesse F Yeates, Jr, sales manager; R H Stinnette, sales promotion; William Backus, technical sales; and Al Amatruda, sales.

Jacques Wolf & Company

Passaic, N J
Booth 85

On display: chemical specialties for textile processing including new detergents, gas-fading inhibitors, cold-water-soluble gum, antistatic and cation-active finishes, etc.

In attendance: G J Desmond, secretary; Walter Deuble, assistant sales manager; George W Apsey, chemist; M F Costello; G W Searell; James E O'Malley, Chicago representative.

INTERSECTIONAL CONTEST

AGAIN the Intersectional Contest will be an outstanding feature of the annual National Convention and is scheduled for presentation on Saturday morning, September 19th, in the North Ballroom of the Hotel Conrad Hilton in Chicago. Prior to last year's contest the Rhode Island Section and the New York Section were tied in awards with 28 points each, based on values of 5, 3 and 2 for first, second and third places respectively (the same ratio in which the prize money is awarded). However, by winning last year, the Rhode Island Section took the lead with 33 points. With 2 points for third place, New York now has 30 points, and Philadelphia by finishing second increased its total from a previous score of 24 to 27. Other scores, unchanged from last year, are: Northern New England, 23, Piedmont, 12 and Southeastern, 5. The record of winners is as follows:

1940—1st, R I; 2nd, S E; 3rd, Phil.
1941—1st, N Y; 2nd, Phil; 3rd, S E.
1942—1st, N Y; 2nd, N N E; 3rd, Phil.
1943—1st, Phil; 2nd, N N E; 3rd N Y.
1944—1st, R I; 2nd, N N E; 3rd, N Y.
1945—1st, R I; 2nd, N N E; 3rd, N Y.
1946—1st, N Y; 2nd, Phil; 3rd, R I.
1947—1st, N N E; 2nd, Phil; 3rd, N Y.
1948—1st, Pied; 2nd, N N E; 3rd, Phil.
1949—1st, R I; 2nd, N N E; 3rd, Pied.
1950—1st, Pied; 2nd, R I; 3rd, Phil.
1951—1st, N Y; 2nd, R I; 3rd, Phil.
1952—1st, R I; 2nd, Phil; 3rd, N Y.

Details of the Contest for this year follow and a bibliography of Intersectional Contest papers appears on page P580.

National Committee

FRANK J O'NEIL, *Chairman*
Pacific Mills

Thomas R Smith
Wiscasset Mills Co

Leonard J Armstrong
The Harshaw Chemical Co

John M Gould
Barre Wool Combing Co, Ltd

Jackson A Woodruff
American Viscose Corp

Kenneth A Howry
Daily News Record

Earle D McLeod, *Secretary*
Arnold, Hoffman & Co, Inc

FRANK J O'NEIL
Chairman, National Committee

LEONARD J ARMSTRONG
Member, National Committee

JOHN M GOULD
Member, National Committee

JACKSON A WOODRUFF
Member, National Committee

KENNETH A HOWRY
Member, National Committee

EARLE D McLEOD
Secretary, National Committee

Judges

Chief Justice

WILLIAM D APPEL
National Bureau of Standards

Judges Representing Sections

Northern New England
Edward S Chapin
W C Durfee Co, Inc

Rhode Island
Peter G Kolupaev
Slatersville Finishing Co

Western New England
William H Horne
American Cyanamid Company

New York
Herman P Baumann
American Aniline Products, Inc

Philadelphia
Malcolm J Reider
Geo W Bollman & Co

Piedmont
Edward A Murray
Deering Milliken Research Trust

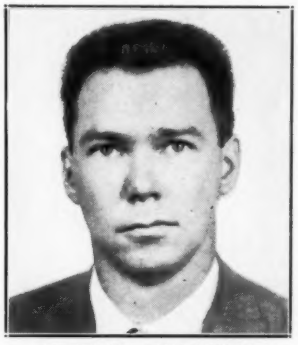
South Central
D Bruce Thornton
Procter & Gamble Co

Mid-West
Arthur I Hultberg
Bear Brand Hosiery Co

Washington
Daniel Frishman
Harris Research Laboratories

EDWARD S CHAPIN
Judge, Northern New England

HERMAN P BAUMANN
Judge, New York



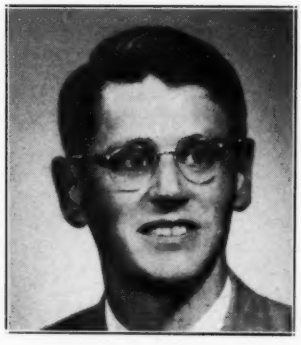
D BRUCE THORNTON
Judge, South Central

PETER G KOLUPAEV
Judge, Rhode Island

MALCOLM J REIDER
Judge, Philadelphia

ARTHUR I HULTBERG
Judge, Mid-West

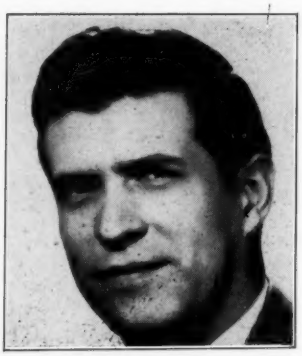
WILLIAM HORNE
Judge, Western New England



EDWARD A MURRAY
Judge, Piedmont

DANIEL FRISHMAN
Chairman, Washington

Sectional Committees



KENNETH L DORMAN
Chairman, Northern New England

Northern New England

KENNETH L DORMAN, *Chairman*
Claflin-Dorman Co
Kenneth R Fox
Fabric Research Labs, Inc
Leverett N Putnam
National Aniline Division
Joseph E Travers
United Aniline Co
G Nathan Reed
Lowell Technological Institute
Roland E Derby, Jr
Lowell Technological Institute
Alfred J Carbone
Sandoz Chemical Works, Inc
S Byron
William W Pennock
E I du Pont de Nemours & Co, Inc

Rhode Island

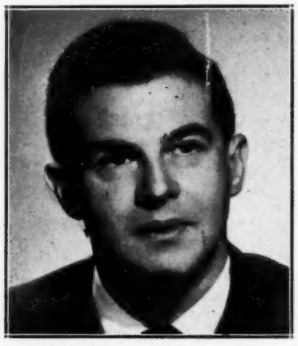
KENNETH J BRODEN, *Chairman*
Sherwin-Williams Co
FRANCIS H CASEY, *Co-Chairman*
Sandoz Chemical Works, Inc
Edward J Allard
National Aniline Division
Raymond K Andrew
U S Oil Co
William H Cady
Ernest J Chornyei
Bradford Dyeing Association
Edward C Collins
General Dyestuff Corp
Alberic T DiMasi
Products Development Lab
Edward H Gamble
E I du Pont de Nemours & Co, Inc
Bertram J Garceau
Arnold, Hoffman & Co, Inc
Thomas W Hardy
Calco Chemical Division
John E Hughes, Jr
Glenlyon Print Works
William J Jutras, Jr
Warwick Chemical Co Division

KENNETH J BRODEN
Chairman, Rhode Island

FRANCIS H CASEY
Co-Chairman, Rhode Island

NEAL A TRUSLOW
Chairman, Piedmont

Raymond W Jacoby
Ciba Company, Inc
Thorwald Larson
Carbic Color & Chemical Co, Inc
Arthur F McLean
Glenlyon Print Works
Edward W Lawrence
Cranston Print Works Co
Alden D Nute
American Cyanamid Co
W George Parks
University of Rhode Island



ROBERT D BLUM, JR
Chairman, South Central

Charles A Robinson
Arnold, Hoffman & Co, Inc
William Stafford
Bradford Dyeing Association
Robert G Thomas
Rohm & Haas Co, Inc
Raymond B Taylorson
Verona Dyestuffs

Piedmont

NEAL TRUSLOW, *Chairman*
U S Rubber Co
Harley Y Jennings
Dan River Mills
Francis K Burr
Burlington Mills Corp
Joseph C King
Fairforest Co
Henry A Rutherford
North Carolina State College
Linton C Reynolds
Riegel Development Labs
Russell G Lawrence
Rohm & Haas Co

South Central

ROBERT D BLUM JR, *Chairman*
May Hosiery Mills
William F Luther
Dixie Mercerizing Co
Wilbur K Newman
Peerless Woolen Mills
Charles A Spratt
National Aniline Division
H A Webb
General Dyestuff Corp
Charles O Starnes
American Aniline Products, Inc
J C Whitt
Standard Coosa-Thatcher Co
Walter K Mobley
Central Franklin Process Co
Donald Gunther
Burkart-Schier Chemical Co

MERRILL G MORRIS
Chairman, Mid-West

VIRGIL T HARTQUIST
Chairman, Philadelphia

EDMUND A LEONARD
Chairman, New York

Mid-West

MERRILL G MORRIS, *Chairman*
National Aniline Division

David A Anderson
Phoenix Trimming Co

Harry W Ericson
American Aniline Products, Inc

Arthur I Hultberg
Bear Brand Hosiery Co

Walter H Jaeger
American Cyanamid Co

Joseph H Jones
Phoenix Dye Works

Jack G Kelley
E I du Pont de Nemours & Co, Inc

Joseph E Norton
Atlas Electric Devices Co

Philadelphia

VIRGIL T HARTQUIST, *Chairman and Speaker*
Jefferies Processors

Harry K Townsley, *Alternate Speaker*

Cotton Group

Frederick V Traut, *Chairman*
Globe Dye Works Co

C T Anderson
Ciba Company, Inc

William L Fickett
General Dyestuff Corp

William H Jordan
W H & F Jordan Jr Mfg Co

L Kevin McChesney
Leatex Chemical Co

Paul J Pernice
General Dyestuff Corp

Nylon Group

John McNamara, *Chairman*
E I du Pont de Nemours & Co, Inc

Frank J Britz
National Aniline Division

Robert F Graupner
American Aniline Products, Inc

Samuel H Loper
E I du Pont de Nemours & Co, Inc

Hector A McCulloch
Clifton Yarn Mills, Inc

George J Moffitt
American Aniline Products, Inc

Lewis Oechslin
Hoffner Rayon Co

Thomas R Scanlan
Hart Products Corp

Clarence A Seibert
Scholler Bros, Inc

George Stevenson
Boger & Crawford

Walter C Walters

George Wunsch
North American Lace Co

Orlon Group

Joseph Laucius, *Chairman*
E I du Pont de Nemours & Co, Inc

Joseph A Brooks
E I du Pont de Nemours & Co, Inc

Herbert Finley
Glasgo Ltd, Inc

Edwin J Grajeck
Collins & Aikman, Inc

C W Holweger, Jr
Royce Chemical Co

Joseph F Kalina
Collins & Aikman Corp

Ludwig P Vollers, Jr
Synthron, Inc

Photography

Felice De Maria
James Lees & Sons Co

Physical Chemistry

Joseph J Benischeck
Fred Whitaker Co, Inc

Wool Group

Alfred F Felgendreger, *Chairman*
Continental Mills, Inc

F W Allendorf
Geigy Co, Inc

Jackson Bauer
Fred Whitaker Co

Felice De Maria

Henry E Rollins, Jr
Sandoz Chemical Works, Inc

Dynel Group

Harry K Townsley, *Chairman*

Harry Birkby

William H Hughes
Philadelphia Textile Institute

Dacron Group

Oleta S Larson, *Chairman*
E I du Pont de Nemours & Co, Inc

Alfred W Cowan
Ankokas Dyeing & Processing Co

Walter C Deakyne

Edward C Diehl
Ankokas Dyeing & Processing Co

Richard W Foltz
Smith, Drum & Co

Thomas P Lee
Keystone Dyeing Co, Inc

Joseph Murphy

Frank Raile

Albert Stutzke
Globe Dye Works Co

Acrilan Group

William S Sollenberger, *Chairman*
American Viscose Corp

John McChesney, Jr
Leatex Chemical Co

Joseph W MacNeil
U S Dyestuff Corp

Bibliography

Richard B Stehle, *Chairman*
Allegheny Dye Works

Arthur W Etchells
Hellwig Dyeing Corp

Thomas R Foltz, Jr
Philadelphia Textile Institute

Secretary

Thomas H Hart
Hart Products Corp

New York Section

Edmund A Leonard
Alexander Smith Inc

Matthew J Babey
Calco Chemical Division

Harry F Clapham
E I du Pont de Nemours & Co, Inc

T A Feild
Carbide & Carbon Chemicals Co

Victor S Salvin
Celanese Corp of America

Walter O Winkler
Forstmann Woolen Co

Abstracts

INTERSECTIONAL CONTEST PAPERS

The Tear Strength of Resin-Treated Textiles

PIEDMONT SECTION

ONE cotton fabric and two rayon fabrics were treated with various amounts of UF resin and softener. These fabrics were then tested for tensile and tear strengths using a wide variety of methods, some of which have not been reported heretofore. The results indicate that some of the tear tests are a more accurate and sensitive index of quality than the tests that are more commonly used in the industry. Data shows the effect on strength of varying amounts of resin. The use of softeners is shown to improve tear strength.

Study of the Effect of Heat and Humidity on Light Fastness of Synthetics in the Fade-Ometer

MID-WEST SECTION

SINCE synthetic fibers have found increased use in our economy more and more instances of variations in color fastness between Fade-Ometer and sunlight ratings have been noted. Work already published and the experiences of many individual observers indicated that variations of heat and humidity may be identified with the causes of changes noted in connection with synthetics.

The purpose of this paper is to determine what influence heat or humidity may have upon the fastness of two groups of three dyestuffs each when applied to different synthetic fibers and where applicable, to natural fiber. The fibers studied were acetate, Dacron, dynel, Orlon and nylon in one group and nylon, Acrilan, Vicara and wool in another group. The wool was included in the second group for checking purposes only.

These tests cover three ranges of temperature and three ranges of relative humidity and have included the exposure of more than 1300 samples. They have all been run in specially-designed equipment with controlled humidity and with temperature electrically controlled to within 0.5° F (±). Comparisons have been run at the same time in Standard FDA-R equipment and in daylight in the new waterproof exposure cabinet. Comparisons of the AATCC Light Fastness Standards as well as the British and German Standards have also been made concurrently. Finally, all of the results have been checked on the new proposed International Geometric Grey Scale.

Wide variations in the results obtained have been found due to differences in temperature and relative humidity. These will be illustrated with both temperature and humidity graphs and the actual exposed samples will be on display at the convention.

It is hoped that changes may be developed in the Fade-Ometer, as a result of this work, which will minimize or eliminate inconsistencies arising from differences in temperature or relative humidity in the machine compared with daylight fading. It is also hoped that specific recommendations can be made with regard to the operation of the machine which will guide the user to the best and fullest utilization of the Fade-Ometer.

An Investigation of the Effect of Resin Finishes on the Light Fastness of Direct Dyes

RHODE ISLAND SECTION

IT is well known that when dyed cloth is given a resin finish, three different conditions arise as to the fastness to light of the finished fabrics. These are:

1. Light fastness is reduced.
2. Light fastness is not affected.
3. Light fastness is improved.

This investigation was undertaken in an effort to find the factor or factors causing these results. It was further thought, if the cause or causes could be determined it might be possible to overcome the effect. Obviously, however, if the cause lay in the molecular structure of the dye it could not be corrected.

The first step was to enumerate possible causes, after which tests could be made in an effort to prove or disprove these points. The possible causes which were considered are:

I. The molecular structure of the dye.
II. Chemical reaction between the dye and resin.
III. Break-down of the resin under the influence of light with the formation of a product which affects the dye.
IV. Molar ratio of urea and formaldehyde.
V. Catalyst used.
VI. pH of resin finish as it remains in the fabric.

This paper summarizes the results of this investigation.

Investigation of Sodium Sulfoxylate-Formaldehyde as the Primary Reducing Agent in Vat Dyeing

SOUTH CENTRAL SECTION

THE objective of this study was to determine the possibilities of utilization of sulfoxylate, both with and without hydrosulfite, in obtaining advantages in dyeing and to evaluate sulfoxylate dyeing with some of the vat dyestuffs in practical applications.

Studies of reduction potentials of sulfoxylate under dyeing conditions were made on the Foxboro Dynalog Redox Recorder and it was found that the potentials developed were comparable to those attained with hydro, sufficiently high to indicate that sulfoxylate could be used alone, under proper conditions in dyeing.

Laboratory dyeings were made in which satisfactory dyeings were made without hydro, enabling procedures to be established for production runs. A tabulation was made of application data which was considered reproducible, pertaining to individual dyestuffs, dyed with sulfoxylate alone, and indicating its possibilities as good or poor in economical and application advantages. Production dyeings were made in batch applications at 8/1 and 20/1 bath ratio to verify laboratory data, where it was felt that near-optimum conditions had been approached.

Factors determining optimum application conditions were

found to be many, and as with hydrosulfite dyeing, extremely variable with individual dyestuffs, fibers, and application conditions. A number of specialized applications were investigated and the possibilities evaluated. Fastness properties of the sulfoxylate dyeings were found to be comparable with hydro dyeings of the same depth.

It was concluded that sulfoxylate offered good possibilities in applications where the following factors are desired:

1. Slower rate of exhaustion.
2. More easily controlled rate of exhaustion.
3. Low "strike."
4. Increased dyestuff stability at high temperatures, particularly the halogenated indanthrones.
5. Better control of pH factor, and increased stability of the reducing agent.

Union Dyeing Wool with Fibers Colored by Dispersed Dyes

NEW YORK SECTION

THE practice of blending wool with synthetic fibers is spreading, due to the development of new synthetic fibers which have unique properties. A special union-dyeing problem exists in cases where the synthetic fiber requires dispersed or "acetate" dyes: the wool present is more or less heavily stained by the dispersed dye. This stain generally has poor fastness to light, washing, and crocking.

The purpose of the New York Section Contest Committee was to find means of overcoming the problem if possible, and thus increase the applicability of certain wool/synthetic blends by determining principles of union dyeing which give good color fastness.

Specifically including in its scope the three blends wool/acetate, wool/Dynel and wool/Dacron, the New York Section paper reports on the following points:

1. an investigation of the factors which affect the degree of dispersed dye staining on wool,
2. a study of processes for dyeing wool/acetate, wool/Dynel, and wool/Dacron unions to obtain desirable fastness,
3. the description of several practical applications, on a plant scale, of dye selection and dyeing processes for the blends mentioned. A wide range of colors for socks, suitings, and floor coverings is included.

The conclusion is made that union-dyed wool/acetate wool/Dynel, and wool/Dacron fabrics of satisfactory colorfastness can be produced.

Leveling Unevenly Dyed Material

PHILADELPHIA SECTION

THE objective of this paper is to provide the dyer with information regarding the means of promoting migration by the use of special methods or auxiliaries.

The investigations were instigated by such considerations as the need to substitute leveling, of an uneven dyeing, for chemical-discharge stripping of wool or protein fibers so as to preserve the hand and tensile strength. Vat-dyed cotton cannot be discharged so leveling is indicated. With regard to hydrophobic fibers relief must be found from the high cost of stripping, in chemicals, machine corrosion and loss of large quantities of dyestuffs.

Migration systems were conducted with various classes of dyestuffs on wool, cotton, nylon, Dynel, Acrilan, Dacron and Orlon.

In all, sixteen classifications covering innumerable auxiliaries and chemicals were tested and evaluations are shown in tables, graphs, and findings of their relative effect on migration.

The results obtained in testing these auxiliaries on the various fibers were sometimes unpredictable and proved quite interesting.

(Details of the paper to be presented by the Northern New England Section were not available at press time.)

A D R AWARD WINNER TO BE ANNOUNCED AT CHICAGO CONVENTION

THE winner of the third annual AMERICAN DYESTUFF REPORTER Award will be announced at the Annual Banquet at the Chicago National Convention. Judges for this year's contest, appointed by the Association's Publications Committee, are: Prof Ethel L Phelps, University of Minnesota, *Chairman;* John N Dalton, Pacific Mills; and Dr Alfred R Macormac, U S Department of Agriculture.

The AMERICAN DYESTUFF REPORTER Award was endowed by the Howes Publishing Company as a memorial to Alfred P Howes, Founder of the A D R. Its purpose is to encourage the presentation of the best possible papers before local and national meetings of the Association. The Award, $200 annually, is presented to the author or authors of the paper considered best in the opinion of the judges. Any technical paper presented before a local or national meeting of the AATCC and published in the *Proceedings* as they appear in the AMERICAN DYESTUFF REPORTER is eligible with the following exceptions: Intersectional Contest papers, papers by employees of the AATCC, reports of work substantially subsidized by AATCC, or reports of research committees. It is a condition of eligibility that the paper have its first publication in the *Proceedings*. Papers published in the *Proceedings* from July 1st of one year to June 30th of the next year are considered in each judging period.

The first presentation of the A D R Award was made at the Annual Banquet of the New York National Convention on October 19th, 1951 at the Hotel Statler, New York, to Drs Mason Hayek and Fred C Chromey of the Jackson Laboratory of E I du Pont de Nemours & Co, Inc. The paper chosen was entitled "The Measurement of Static Electricity" and was published in the March 5, 1951 issue. It had been presented before the Auxiliaries and Testing Group Meeting at the Portsmouth National Convention in 1950 by Dr Hayek.

The second presentation of the Award was made at the Annual Banquet of the Boston National Convention on November 8th, 1952 at the Hotel Statler, Boston, to Charles J Lyle, Joseph J Iannarone and Dr Robert J Thomas of the Technical Laboratory, E I du Pont de Nemours & Co, Inc. The paper selected was "High-Temperature Dyeing of New Synthetic Fibers" which was published in the September 17, 1951 issue. The paper was presented by Dr Thomas before the Rhode Island Section in Providence on May 25, 1951.

BIBLIOGRAPHY OF INTERSECTIONAL CONTEST PAPERS*

Presented by Sections of the

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS

INTRODUCTION

THIS bibliography includes all of the papers that have been presented since the start of the Intersectional Contest of the American Association of Textile Chemists and Colorists in 1940. The wide scope of these studies demonstrates the extent to which the objects of the Association are being advanced. These objects are:

(1) To conduct research in the practical problems of importance to the textile industry

(2) To promote increase of knowledge of the application of dyes and chemicals in the textile industry

(3) To establish and maintain quality standards whereby the industry is enabled to regulate itself

(4) To provide for its members channels for the free exchange of ideas and professional experiences for the benefit of the industry

(5) To serve as a lasting educational medium for the technical personnel of the industry

Under the rules of the Contest, each Section of the Association establishes a local Intersectional Contest Committee which prepares a paper for presentation at the Annual Convention. The popularity of this annual event is evident in the large proportion of the sections that have competed every year. There are at present 13 Sections in the Association. In 1940 there were 8.

The papers are judged by a committee comprising one representative from each section of the Association. The judging is carried out on the following basis:

Originality	30%
Scientific Value	30%
Practical Value	30%
Presentation	10%

The awards are announced at the close of the Convention for first, second and third places.

The Contest papers for the curent year are now completed, but suggestions for subjects can be submitted for future consideration by the various sectional committees. In offering suggestions, it should be borne in mind that the work required must be original and have practical and scientific value. Suggestions may be sent to Mr Frank J O'Neill, Chairman, AATCC Intersectional Contest, Pacific Mills, Lawrence, Massachusetts.

* Numbers beside titles indicate: 1—First Prize. 2—Second Prize. 3—Third Prize. Publication date in the American Dyestuff Reporter follows the title.

BIBLIOGRAPHY

1940

1—"The Effect of Modern Finishing Agents on the Light Fastness of Cotton Colors"—(P686, December 23, 1940)

2—"Some Observations of the Tendering of Vat and Naphthol Dyed Army Duck on Total Exposure to Weathering"—(P62, February 3, 1941)

3—"Variables Encountered in Fade-Ometer Testing"—(P64, February 3, 1941)

"Development of Hosiery Processing in the South"—(P202, April 14, 1941)

"Informative Textile Labeling"—(P657 December 9, 1940)

"An Analysis of the Split-Bath Method of Dyeing Silk Hosiery"—(P211, April 14, 1941)

"Screen Printing Cotton Table Damask"—(P90, February 17, 1941)

"What's New in New England"—(P110, March 3, 1941)

1941

1—"Cotton Fabric Construction in Relation to Water Resistance"—(P6, January 5, 1942)

2—"Testing Vat Dyed Cotton for Fastness to Hypochlorite Bleaching"—(P682, December 8, 1941)

3—"Progress Report on the Preparation and Processing of Domestic Flax"—(P673, December 8, 1941)

"Evaluation of Finishing Agents for Sanforizing"—(P679, December 8, 1941)

"The Textile Chemist Meets National Defense Emergency"—(P690, December 8, 1941)

"Relative Exhaustion of Vat Colors in Pad-Pigment Method of Jig Dyeing"—(P696, December 8, 1941)

"The Prediction and Control of Colored Blends by Optical Means"—(P698, December 8, 1941)

1942

1—"Calibration of Fade-Ometers"—(P594, December 7, 1942)

2—"Evaluation of Light Fastness by Means of a Spectrophotometer"—(P600, December 7, 1942)

3—"The Color Fastness of Certain Types of Dyes on Women's and Children's Wearing Apparel Fabrics"—(P603, December 7, 1942)

"Training Dye Plant Workers in the Present Emergency"—(P632, December 7, 1942)

"Effect of the Present War on Hosiery Dyehouses"—(P630, December 7, 1942)

"A Study of the Effects of Extracting and Drying on the Carding and Spinning of Raw Stock Dyed Cotton"—(P628, December 7, 1942)

"Continuous Peroxide Bleaching"—(P638, December 7, 1942)

"Impact of Wartime Requirements on Post-War Finishes"—(P634, December 7, 1942)

1943

1—"Minimum Chrome Necessary for Afterchrome Dyeing"—(P502, November 22, 1943)

2—"New Proposed Standards for Light Fastness"—(P511, November 22, 1943)

3—"A Study of Textile Fibers and Fabric Constructions as Factors Influencing Adhesion of Textile-Plastic Combinations"—(P513, November 22, 1943)

"The Effect of Raw Stock Dyeing on the Fiber and Manufacturing Properties of Cotton"—(P527, November 22, 1943)

"Aralac"—(P532, November 22, 1943)

"A Proposed Method for the Evaluation of Detergens"—(P534, November 22, 1943)

"The Processing of Acetate Full-Fashioned Hosiery"—P524, November 22, 1943)

1944

1—"Factors Affecting Color Yield in Vat Color Printing"—(P502, December 4, 1944)

2—"The Effect of Wet Finishing on Certain Physical Properties of Nylon"—(P146, April 9, 1945)

3—"A Study of the Dimensional Changes of Rayon Fabrics"—(P509, December 4, 1944)

"Starch Fluidities"—(P513, December 4, 1944)

"Effect on the Appearance of Hosiery Made from Viscose, Bemberg and Acetate Yarns Subjected to Variations in Tension and Steaming during Throwing"—(P518, December 4, 1944)

"Some Tendering and Nontendering Influences Commonly Present in Sulfur Dyeing"—(P521, December 4, 1944)

"Cotton Knitting Yarn: Factors Influencing its Knittability"—(P524, December 4, 1944)

1945

1—"Factors Which Cause or Prevent Agglomeration of Pigment Particles"—(P3, January 14, 1946)

2—"The Mechanics of Zone Control in Resin Finishing"—(P13, January 14, 1946)

3—"Evaluation of Fabrics as to their Flammability" — (P20, January 14, 1946)

"Some Effects of Dry Heat on the Properties of Nylon Fabrics"—(P38, January 14, 1946)

"Practical Effect of Stretching Synthetic Yarns"—(P26, January 14, 1946)

"How Different Types of Dyestuffs Affect the Rate of Deterioration of Cloth Exposed to Weathering"—(P29, January 14, 1946)

1946

1—"Tippy Dyeing of Wool and its Control"—(P486, September 8, 1947)

2—"The Effect of Dyestuffs on the Temperature Rise of Fabrics Exposed to Light"—(P159, April 7, 1947)

3—"The Replacement of Starch in the Treatment of Textile Fibers and Fabrics"—(P166, April 7, 1947)

"A Study in Detergency"—(P91, February 24, 1947)

"How the Mineral Content of Cotton Can Affect Beam Dyeing with Vat Colors"—(P104, March 10, 1947)

"Some Aspects of the Saponification of Acetate Rayon"—(P64, February 10, 1947)

"An Evaluation of the Kupensaure Process"—(P142, March 24, 1947)

1947

1—"An Electrolytic Method for Stripping Color from Dyed Wool"—(P119, February 23, 1948)

2—"The Application of Chemical Controls to Acid Dyeing"—(P149, March 8, 1948)

3—"Dyeing and Fastness Characteristics of Aqueous-Chlorinated Wool" — (P221, April 5, 1948)

"The Effect of Electrical Charge in the Application of Dyestuffs"—(P697, December 1, 1947)

"Studies in Soiling and Detergency"—(P734, December 15, 1947)

"Weather-Protective Treatments for Cotton Duck"—(P705, December 1, 1947)

"The Application of Carboxymethyl Cellulose to the Wet Processing of Textiles"—(P596, September 6, 1948)

"The Effect of Urea on Cellulosic Textiles"—(P10, January 12, 1948)

1948

1—"Stability of Vat Colors at Elevated Temperatures"—(P213, March 7, 1949)

2—"A Spectrographic Study of Treated Textiles"—(P838, December 13, 1948)

3—"Some Phases of High-Temperature Dyeing"—(P9, January 10, 1949)

"Vocational Texts in Practical Wet Processing" — (P788, November 29, 1948)

"Preliminary Study of Variables in Padding"—(P159, February 21, 1949)

"Some Conditions Affecting the Applications of Vat Colors"—(P69, January 24, 1949)

"The Solubilization of Dyestuffs with Surface-Active Agents"—(P728, October 3, 1949)

"The Effect of Sulfur Black on the Tendering of Cotton Yarns"—(P833, December 13, 1948)

1949

1—"Acid Colloids of Resins"—(P842, November 28, 1949)

2—"Practical Tests for Quantitatively Evaluating Dye Characteristics and Dyeing Methods" — (P812, November 14, 1949)

3—"Dyeing Mixed Acetate and Viscose Fabrics with Vat Colors"—(P816, November 14, 1949)

"Factors Influencing Crockfastness of Package-Dyed Naphthol Cotton Yarns"—(P786, October 31, 1949)

"Dimensional Changes Occurring in Spun Viscose Rayon Fabrics during Processing on Machinery Used in Shrinkage Stabilization Finishing" — (P822, November 14, 1949)

"A New Approach to the Evaluation of Wool Oils for Resistance to Oxidation in Storage" — (P633, September 18, 1950)

"The Application of the Differential Dyeing Test for Fiber Maturity to the Processing of Cotton"—(P74, February 6, 1950)

1950

1—"A Comparison of the Dyeing Characteristics and Related Properties of Rain-grown and Irrigated Cotton"—(P901, December 25, 1950)

2—"The Continuous Dyeing of Nylon Fabrics"—(P14, January 8, 1951)

3—"The Relating of Laboratory Exhaust Data on Mill Practice"—(P84, February 5, 1951)

"The 'Strip Tester,' An Instrument Designed to Measure Dimensional Change in Woven Rayon Fabrics" — (P210, April 2, 1951)

"Spectrophotometric Studies of Continuous Dyeing"—(P101, February 5, 1951)

"A Simplified Method for the Determination of the Oil Content of Textiles"—(P30, January 8, 1951)

1951

1—"The Measurement of Fabric Soiling"—(P322, May 26, 1952)

2—"The Continuous Dyeing of New Synthetic Fibers"—(P223, April 14, 1952)

3—"Some Variables in Improving the Crease Recovery of Cotton Fabrics with Synthetic Resins" — (P196, March 31, 1952)

"The Effect of Agitation on Dyeing (Part I—Wool and Acid Dyes)"—(P851, December 24, 1951)

"Toward a Simple Mechanical Means of Judging Hand"—(P167, March 17, 1952)

"A Study of the Effects of Fabric Construction and Mercerization on Fastness to Light and Washing of Vat Dyes"—(P173, March 17, 1952)

"New Developments in the Dyeing of Synthetic Fibers"—(P35, January 21, 1952)

1952

1—"Printing of Acrylic and Polyester Fibers"—(P99, February 16, 1953)

2—"The Stripping of Color from Hydrophobic Fibers" — (P190, March 30, 1953)

3—"Variables Affecting Dye Fixation in Padding"—(P108, February 16, 1953)

"The Effect of Conditioning on Crease Recovery Angle" — (P268, April 27, 1953)

"A Study of New Techniques in Warp-Size Preparation" — (P300, May 11, 1953)

"Textile Odors and Deodorants" — (P67, February 2, 1953)

Olney Medal to be Awarded to
ROLAND E DERBY

THE tenth award of the Olney Medal will be made to Roland E Derby at the Olney Medal Award Luncheon on Friday, September 18th at the 1953 National Convention in the Hotel Conrad Hilton, Chicago. Previous winners of the award were:

Dr Louis A Olney—1944
Dr Milton Harris—1945
William H Cady—1946
Edward R Schwarz—1947
Harold M Chase—1948
Charles A Seibert—1949
Dr George L Royer—1950
Raymond W Jacoby—1951
Werner von Bergen—1952

The Olney Medal was endowed by the Howes Publishing Company and is awarded by the A A T C C annually, or at such longer intervals as the Committee of Award may elect, to a citizen of the United States, for outstanding achievement in the field of textile chemistry, including the development of chemical agents or chemical processes used in the manufacture of textiles, or methods for their evaluation. Its purposes are to encourage and to afford public recognition of such achievements and contributions, and to be a testimonial to Dr Louis A Olney in recognition of his lifetime of devotion and multitudinous contributions to this field.

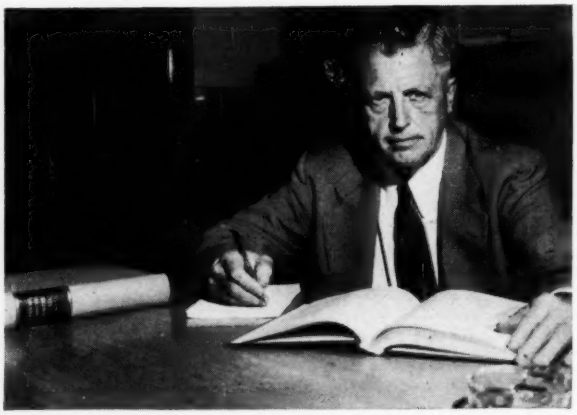
The election of a candidate to receive the Award under the rules agreed upon by the Association and the Howes Publishing Company is by unanimous vote of the Olney Medal Committee of five, constituted as follows: (1) the President of the Association; (2) a member of the faculty of an educational institution awarding degrees in chemistry; (3) an employee of a concern manufacturing chemical products used in textile wet processing; (4) an employee of a concern manufacturing textiles; (5) a member at large who may be any qualified individual. All must be Senior members of the Association.

The present members of the committee and their terms of service from January, 1953 are (1) President J Robert Bonnar; (2) Henry A Rutherford, 2 years; (3) Raymond W Jacoby, 3 years; (4) Harley Y Jennings, 4 years; (5) William D Appel, 1 year. The Secretary of the Association is Secretary of the Committee without vote. As the term of each elected member expires, the committee itself elects a successor to serve for 4 years.

* * * * *

FOR ACHIEVEMENT IN TEXTILE CHEMISTRY
LOUIS ATWELL OLNEY
THE OLNEY MEDAL AWARDED BY THE AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS TO

The Olney Medal.



The Medalist checking some literature references in the American Dyestuff Reporter.

This year's medalist was born on November 15th, 1900 in Lowell, Mass, where his father, proprietor of the Derby Electric Company, installed the first electric light. His early years were spent in Woodstock, New Hampshire, where he attended elementary school and later he was a student at Mitchell Military School in Billerica, Mass from 1914 to 1918. He entered Lowell Technological Institute in 1918 studying chemistry and dyeing under the late Dr Louis A Olney. During the summer vacations in this period he worked in the dyeing and finishing plants of Merrimack Cotton Corp and Merrimack Woolen Mills.

Following graduation in 1922 he became Assistant Chemist at Lowell Bleachery and in September of that year he returned to Merrimack Woolen as Overseer of Dyeing. From October, 1923 to November, 1927 he was employed as Superintendent of Dyeing and Finishing at Lowell Dye Works when he again returned to Merrimack Woolen. In January of 1928 Merrimack Woolen was purchased by M T Stevens & Sons Co and Mr Derby's affiliation with that company started, becoming Head Chemist in June of 1928. He held that position until June, 1940 whe he started two companies he now operates: The Derby Company, Inc, a service laboratory and Textile Aniline & Chemical Co, Inc, a dyestuff and chemical sales organization.

Mr Derby's membership in A A T C C dates back to 1921 when he was still a student at L T I and he has served as Chairman of the Northern New England Section, as National Councilor and as National Vice President. He has also served on the following A A T C C Committees: General Research, Colour Index, Chemical Technology of Wool, Carbonization of Wool (Chairman), Wash Fastness Tests for Dyed Wool, Analysis of Fiber Mixtures, Analysis of Wool Textile Materials for Soap, Oil, etc, Cooperating with Government on Uniform Fabrics, Detergency—Wool Group, Evaluation of Detergents for Wool, and Q M—Air Force Dye Survey. He has presented papers before several sections of the A A T C C, the Canadian A T C C, and at Lowell Technological Institute.

The Medalist at his hunting camp in Maine with his dog Mike (White Cap's Mike II).

The Medalist at work.

He is currently President of the Lowell Technological Institute Research Foundation, a member of the LTI Building Foundation, and served 3 terms as a Trustee of L T I.

In 1939 he developed and patented the Derby Continuous Dry Cleaner now generally used by many large woolen mills and also developed and patented an apparatus and process for continually neutralizing dry acid cloth. Mr Derby was the first to show how carbonizing resist was produced in a practical way and how to duplicate these results in the laboratory as published in the AMERICAN DYESTUFF REPORTER on March 25 and May 6th, 1935 under the title "A Fundamental Study of the Wool Carbonization Process". He successfully developed processes for practical application of soluble vats to piece dye work for indigo shades for the Navy during World War II and also successfully produced chrome-piece-dyed duplication of indigo-dyed shades for the Navy.

Mr Derby's home since 1925 has been in Tyngsborough, Mass and his family is composed of his wife Ardelle M, a son, Roland E, Jr and a daughter, Mrs J W Taylor. His son has received a B S in Chemistry from M I T, an M S from L T I where he served as an instructor in Textile Technology for 3 years, and is now studying at M I T for his Sc D degree. The son is also active in business as President and Director of The Derby Company, Inc.

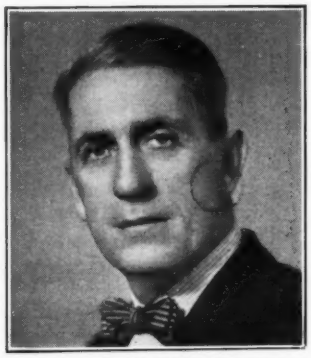
The Medalist's hobbies include photography, private flying (he is a licensed pilot and operates both a company-owned plane and his personal plane), farming, and hunting and fishing.

Hugh Comer to be Principal Speaker at Annual Banquet

HUGH M COMER, Chairman of the Board of Avondale Mills, will again be the principal speaker at the Annual Banquet on Saturday, September 19. The title of his talk will be "New Frontiers ——Exciting and Challenging". Those who attended the 1948 National Convention in Augusta will remember his amusing and inspiring address given during the Annual Banquet at the Sheraton Bon Air Hotel on October 23rd.

Mr Comer was born in Birmingham, Alabama on June 9, 1892, the tenth child of Braxton Bragg and Eva Jane (Harris) Comer. He attended the Paul Hayne High School in Birmingham and when his father was selected Governor of Alabama, he attended the Stark University School in Montgomery. Later he attended Emory and Henry College at Emory, Virginia, and then went to the University of Alabama at Tuscaloosa, where he was graduated in 1914.

He joined Avondale Mills as supply room clerk and overseer in charge of outside maintenance, later being in charge of weighing and classing the cotton, first at Sylacauga and then at Birmingham. In April 1917 he entered the Army and saw active service in France as a 1st Lieutenant in the cavalry. After the war he returned to work at the Birmingham plant and later returned to Sylacauga. In 1923 the mills at Sycamore, Alexander City and Pell City, Alabama, were purchased and Mr Comer was sent to Sycamore to supervise the renovation of that plant. He remained at Sycamore until 1929 during which time the capacity of the plant was more than doubled. He assumed charge of the plants in Sylacauga about this time, as well as at Sycamore, and a few years later assumed charge of the plant in Alexander City. He subsequently was made general manager of all the company's properties. In 1927 he was made a vice-president and director and in 1936 became vice-president and general manager. In July 1940 he became executive vice-president and in July 1945 became president and treasurer.



H M Comer

Mr Comer is active in many trade and civic organizations and holds executive posts with several firms other than Avondale Mills.

Mr Comer married Gillian Elizabeth Goodall in 1921. They have two daughters.

Abstracts of Technical Papers

SCIENCE FIBERS

Thursday, September 17, 1953

The Dynel "Inner Structure"

T A FEILD, JR, C A SETTERSTROM and C W DAVISSON
Carbide and Carbon Chemicals Company

The isolation of each of the separate fiber structures, in a fabric prepared from two or more stock blended fibers, has proved to be a useful tool for determining the influence of each fiber on dimensional stability, color, lightfastness, uniformity of blending, damage from excesive heat, abrasion, loft, and pleat retention of the original fabric.

Methods for preparing inner structures of dynel and other fibers are detailed and the adaptability of the techniqce to a wide range of fiber blends is suggested.

C A Setterstrom

Carl A Setterstrom is sales manager, Textile Fibers, Carbide and Carbon Chemicals Company. He received his engineering degree from the Polytechnic Institute of Brooklyn, and has been a member of the staffs at Mellon Institute of Industrial Research and the Boyce Thompson Institute for Plant Research. Employed by Carbide and Carbon Chemicals Company since 1940, Mr Setterstrom has been concerned chiefly with the development of new markets for organic chemicals and textile fibers.

Acetate Blends of Improved Performance

F FORTESS, B S SPRAGUE and R G STOLL
Celanese Corporation of America

The problem of the balancing of the physical characteristics in blends, is discussed and data are presented on acetate-viscose and acetate-viscose-nylon blends having optimum performance characteristics.

Different finishing techniques used on acetate blends to enhance further the performance characteristics are described. Commercially feasible techniques for improved color fastness on acetate-viscose and acetate-viscose-nylon blends are also presented.

Construction, dyeing procedures and performance characteristics of acetate-wool blends are stated pointing out the effectiveness of acetate in producing fabrics having wool-like performance characteristics.

B S Sprague

B Sheldon Sprague is head of the Textile Evaluation Research Section of the Summit Research Laboratories, Celanese Corporation of America. He received his AB in Chemistry from Swarthmore College and his Master's Degree in Chemistry from Brooklyn Polytechnic Institute. He has been with the Celanese Corporation since 1944.

Recent Advances in Dyeing "Orlon" Acrylic Fiber and "Dacron" Polyester Fiber and Blends Of These with Other Fibers

J F LAUCIUS
Jackson Laboratory, E I du Pont de Nemours & Co, Inc

An up-to-date summary of recent advances in the dyeing of Orlon acrylic fiber and Dacron polyester fiber is presented with special emphasis on the dyeing of blends of the two new fibers with presently available fibers. Recent developments in dyeing Orlon with dispersed, vat, and particularly basic dyes, are covered. In addition, the cuprous ion method of dyeing Orlon is reviewed, especially with regard to reducing agents, selection of dyes, and temperature of dyeing. In the dyeing of Dacron polyester fiber with dispersed colors, the status with reference to carriers and pressure dyeing is given.

J F Laucius

Joseph F Laucius is in charge of the Dye Application Division in the Jackson Laboratory, E I du Pont de Nemours & Co, Inc. He received his BS, MS, and PhD from the Pennsylvania State College. He has been with Du Pont since 1940 and has been engaged primarily in the development of new dyes and dyeing methods.

Laundering Properties of the Science Fibers

GEORGE H JOHNSON
American Institute of Laundering

The increasing appearance of the new science fibers in the form of sport shirts, hosiery, dress goods, drapes and blankets has caused the laundry industry to give much thought to processing them. Fiber identification by laundry classifiers, especially in the case of blends, is almost an impossibility. The launderer therefore must set up his washing and finishing operations to take care of one general classification to avoid excessive color loss, felting of wool (if present), extractor wrinkles, and high-lights from pressing. Usually colored articles of this type are divided into a light and dark colored classification.

Problems experienced to date with dynel have been due to the low melting point of this fiber. Dynel hose dried on closed steam-heated forms fuse and shrink. Similar hose, when tumbler-dried, sometimes tends to shrink gradually. Undyed nylon and Orlon may become darkened when pressed.

The wash and light fastness of various nylon, Orlon and wool blends have not always been of the best. Bleeding and poor resistance to perspiration are not uncommon. Some Orlon-wool blends have been observed to shrink when pressed.

Spun yarns used in men's hosiery at times have tended to "pill". The greatest difficulty of all has been the tendency for some of the science fibers to form extractor wrinkles that cannot be removed by pressing.

It is the suggestion of the laundry industry that the end use of the newer fabrics always be given consideration.

George H Johnson

George H Johnson is vice president of the American Institute of Laundering. He is a graduate of Lowell Textile Institute, Class of 1920, and a veteran of World War I.

Mr Johnson has had mill experience with the Hamilton Woolen Company, Garfield Worsted Mills and McLaughlin Textile Corporation.

After five years at the Mellon Institute of Industrial Research, where he was in charge of the Laundry Research Fellowship, his Department was transferred to the newly constructed American Institute of Laundering, Joliet, Illinois, where he served as director of research until his appointment as vice president about six years ago. Mr Johnson is the author of the book "Textile Fabrics" and of many papers dealing with the laundering properties of textiles and washroom procedures.

HOSIERY

Friday, September 18, 1953

Color Development and its Relation to Fashion

HELEN SISSON
Phoenix Hosiery Company

The Twentieth Century has brought a big change not only in our way of living but in the way we see life. Modern art and architecture, the movies, technicolor, the airplane, television and three dimensional movies and the promise of color television have developed vision and awakened a mass demand for color, texture and form in the most utilitarian objects. Color, therefore, is no longer the exclusive possession of the fine artist. It is the tool of the designer, the artisan, the scientist and the industrialist. A working knowledge of color is essential to the development of any product from hosiery to automobiles. Color sells Mr and Mrs Consumer, and what Mr and Mrs Consumer buy multiplied by 150 million is fashion. The workings of fashion are no longer secret but science. Fashion trends when spotted, watched and capitalized on can grow into a tidal wave. Since the war, a totally new kind of color trend has been developing and is building a whole new world of fashion. Everyone connected with the fashion industry should acquaint himself with this color trend and the new kind of vision which is responsible for its growth. The talk will be illustrated throughout.

Helen Sisson

Helen Sisson, fashion director of the Phoenix Hosiery Company, has held executive positions with Marshall Field and Company, Saks Fifth Avenue, Montgomery Ward and Pola Stout Inc. She has taught fashion merchandising at Northwestern University and New York University Schools of Retailing and has lectured extensively on color and fashion at schools and colleges.

A New Method of Vat Dyeing of Hosiery

ROBERT D BLUM, JR
May Hosiery Mills

In vat dyeing of seamless hosiery of various fibers, the chief problems encountered are: penetration, levelness, reproduceability, and union problems, where multiple fibers are used in construction. A novel method has been developed and used in production in overcoming these difficulties. The method has been particularly successful in levelness problems on pastel shades and penetration problems of tightly knit fabrics and, in addition, makes possible the utilization of vat dyestuffs heretofore not applicable to conventional dyeing methods. Several unusual applications of the method will be discussed, including a simple method of topping vat dyeings with conventional vat dyestuffs without losing any of the base vat dyestuff of the original shade. Colored slides will illustrate the various phases discussed.

R D Blum, Jr

Robert D Blum, Jr is technical director of the May Hosiery Mills. A graduate in chemical engineering from Vanderbilt University, he has had experience with the Se-Ling Hosiery Mills, Stein, Hall and Company, and the Textile Section of the Office of Price Administration. Mr Blum served in the Mediterranean Theater in World War II with the rank of Major. His technical specialty is in wet-processing research and development of dyeing methods using vat and azoic dyestuffs.

Woolen and Worsted Spun Yarn in Hosiery

ELWOOD W MUNZ
Richard C O'Brien

A summary of the woolen and worsted systems of spinning. A correlation between these methods of spinning and their use in hosiery. Resumé of the fibers used in hosiery that can be spun by these systems. Characteristics of yarns spun by these systems and their effect on the properties of the finished hosiery.

E W Munz

Elwood W Munz is sales representative of Richard C O'Brien. He has attended the University of Maryland, Johns Hopkins University, the University of Pennsylvania, and the Philadelphia Textile Institute.

Mr Munz, formerly general manager of the Resolute Knitting Mills, is well versed in the field of seamless hosiery.

How the System of Yarn Manufacturing, as Well as the Fiber's Physical Properties, Affects the Characteristics of Yarn For Use in Half-Hose

JOHN B CARON
Caron Spinning Company

This paper explains how the characteristics of worsted and synthetic spun yarns are determined by the system of manufacturing on which these fibers are processed, as well as the physical properties of the fiber.

Physical properties, such as staple length, crimp, luster, and quality or denier, each impart certain characteristics to a yarn that are determining factors in the type of half-hose to be produced. In wool these physical properties are also effected by the breed of sheep, country of origin, and even the particular section of the country in which the sheep are raised.

Beside the physical properties of the fiber, the system of manufacturing contributes materially to the different characteristics of spun yarn. In addition to the Bradford, French, and woolen systems of manufacturing, there has now been added the American system and modifications of the cotton system, as well as other composite systems that are difficult to label with an adequately descriptive name.

These various manufacturing systems and the different characteristics of the yarn produced on each of these systems will be discussed.

J B Caron

John B Caron is treasurer of the Caron Spinning Company, manufacturers of worsted and synthetic yarn. He received his Bachelor of Science in chemical engineering from the University of Notre Dame. Mr Caron is in charge of all raw material purchasing for his company, and has traveled extensively through the world's wool-producing areas (Australia, New Zealand, Argentina, Uruguay, Brazil, Peru) as well as the major wool-producing areas of this country. He has also directed the development of the new synthetic fibers for Caron Spinning Company and has been connected with the development of new manufacturing processes for worsted and spun synthetic yarns.

WOOL

Friday, September 18, 1953

Practical Aspects of Wool Scouring

R E WOLFROM
Rohm and Haas Company

This paper describes from a practical standpoint, the scouring of grease wool with nonionic detergents. Following a brief statement of the problem, the choice of detergent by laboratory procedures is discussed, and typical commercial plant equipment is described.

The main body of the paper recounts the author's experience in large scale scouring of carpet wool and apparel wool. Considerable engineering data are presented on such matters as detergent adds and control measures during the run; cost calculations comparing various detergents are also discussed.

The successful extraction of wool grease and adequate disposal of waste effluents is also mentioned.

R E Wolfrom

Robert E Wolfrom is a member of the staff of the Central Research Laboratories of the Rohm and Haas Company. He attended Lehigh University and later received his BS degree from the Philadelphia College of Pharmacy and Science. Mr Wolfrom has had wide experience in product development and market research. With the Rohm and Haas Company he has been chiefly concerned with product and sales development of textile chemicals and auxiliaries with major emphasis in the surfactant field.

The Nature of the Modifications of Wool by Various "Chlorination" Processes and Their Effect on the Wear-Life of Shrink-Resistant Materials

D FRISHMAN and M HARRIS
Harris Research Laboratories, Washington, D C

Shrink-resistant wool is most widely produced today by many variations of the so-called "chlorination" process. There is a general tendency to consider all such processes and their effects on the overall properties of wool as being very similar, whereas in practice, they differ widely in the degree of shrink-resistance obtained and in the extent to which they modify other desirable properties of the fiber. The present discussion will consider the fundamental basis for these differences and demonstrate the bearing of such differences on the useful life of treated materials as determined through actual wear tests. Data will also be presented which confirms the utility of the alkali-solubility test as a measure of the changes produced in wool by oxidative treatments.

D Frishman

Daniel Frishman is manager of the Harristrip Division on Research and Development for the Improvement of Wool and Wool Processing, Harris Research Laboratories.

Dr Frishman received a bachelor's degree at Brooklyn College, his master's degree from Catholic University, and his PhD from Georgetown University. He has been director of research for A Hollander & Son; and a technical advisor, Manhattan Project, Oak Ridge, Tennessee. Also, he was connected with the Textile Foundation and the National Bureau of Standards.

Application of Calcofast Dyes to Wool

HENRY E MILLSON
Calco Chemical Division, American Cyanamid Company

In contrast to milling dyes, Calcofasts level best when applied from a strong sulfuric acid dyebath. Microscopical studies have shown that while pH is important, the kind of acid used has a greater influence upon the leveling and distribution of these dyes than does the pH. Kodachrome slides will be used to illustrate the difference in levelness obtained at the same pH with acetic, formic, phosphoric and sulfuric acids. It was found that the higher the concentration of sulfuric acid the greater the amount of dye which remains in the "exhausted" dyebath.

Penetration of Calcofasts is retarded in those areas of the wool fiber where the epicuticle and scales are intact. Penetration can be aided by increasing the concentration of sulfuric acid or by the use of surface-active leveling agents.

Studies with the Microdyeoscope have shown that most nonionic surface-active agents are safe to use and less liable to cause trouble than cationic surface-active agents. It was found that strongly cationic agents generally react with Calcofasts and cause precipitation of the dye, resulting in the formation of an "insoluble" scum which is difficult to remove when it adheres to wool yarn or fabric.

Care must be exercised in the use of sequestering agents. An excess may bring about demetalization of the metalized dyes.

The lecture will be illustrated with Kodachrome slides.

Henry E Millson

Henry E Millson is manager of the Dyes Technical Service Laboratories, American Cyanamid Company, Calco Chemical Division.

The Dyeing Characteristics of Different Wool Grades

WILLIAM F BROMMELSIEK and WERNER VON BERGEN
Forstmann Woolen Company
and
HENRY E MILLSON
Calco Chemical Division, American Cyanamid Company

The dyeing properties of four wools were studied, viz, an Australian Fine, a New Zealand Medium, Domestic Fine and Domestic Medium.

Dyeings conducted from pieces made from these four wools showed considerable spread in depth of shade. The analyses revealed that these shade differences are directly related to the fiber fineness. One wool grade differing is equal to a five per cent difference in the depth of shade.

In addition to the study of the four wools in piece form, dyeing studies were also made on top as well as on individual staples.

In this study were included acid, metalized and chrome dyestuffs. Spectrophotometric analysis of the dye liquor during practical dyeing shows that there was no difference in the amount of total exhaustion from the dyebath between the four wools. Bet slight differences in the rate of exhaustion are present.

Several techniques, including the use of the Microdyeometer as developed by Calco as well as microscopical studies, have been used to ascertain the causes of actual shade differences between wool grades.

W F Brommelsiek

William F Brommelsiek is a staff member of the Research and Control Laboratories of the Forstmann Woolen Company, where he holds the position of supervisor of quality control. He received his formal education at the Textile School in Aachen, Germany, where he was graduated as a textile engineer in 1938. Following graduation, he worked in the dye laboratories of the former I G Farbwerke in Leverkusen and Hoechst, Germany.

He has held various positions with the Forstmann Company, including that of overseer of the stock, top and yarn dye.

Mr Brommelsiek is a teacher of a Raw Materials and Manufacturing Course at the Forstmann Plant. He is chairman of the Wool Division on the Fastness to Washing Committee of AATCC.

COTTON

Friday, September 18, 1953

Cotton—An Old Fiber With A New Future

LEONARD SMITH
National Cotton Council of America

Cotton, long considered an unchanging and unchangeable textile fiber, is becoming a new, different and more useful textile raw material.

Through breeding research in recent years, it has improved in length and strength, and different fiber diameters are available. By physical treatment, it is now possible to produce cotton of increased luster, of greater or lesser crystallinity at will. The importance of these changes, in terms of yarn and fabric performance and in terms of response to chemical treatment, is receiving further study. A polyhydric alcohol, cotton reacts chemically to yield fibers of startlingly different characteristics. The esters and ethers which it forms are proving valuable in many diverse uses. Because of its excellent bonding properties, cotton responds to treatment with a wide variety of finishes and coatings which make it more serviceable in specific markets.

The versatility of cotton has long been recognized. Research is now converting cotton into specialty fibers designed to give ultimate performance in particular uses.

L Smith

Leonard Smith, the director of utilization research, National Cotton Council, received his Bachelor of Science degree and his Doctor of Philosophy degree from the University of Maryland. During World War II he was chief of the Technical and Intelligence Branch, Air Chemical Office, U S Army Air Forces. Colonel Smith was awarded the Legion of Merit for contributions pertaining to the development of air munitions.

Better Mercerizing for Improved Luster*

LYMAN FOURT and ARNOLD M SOOKNE
Harris Research Laboratories, Washington, D C

Mercerizing is the most widely practiced means of improving the luster of cotton, and can be one of the most effective. However, some of the other objectives of mercerization, such as improved dye uptake, or modified strength or elongation properties, are not completely compatible with highest luster development, so a compromise is usually made.

The degree of luster obtainable by mercerizing is also limited by the kind of cotton used, the twist and plying of the yarns, the fineness of the yarns, and in woven goods, the pattern of interlacing and the cover factor or compactness of weaving.

Taking account of the limitations which arise outside the mercerizing process itself, there are additional factors within the mercerizer's control, which will influence the results on yarn or fabric made from any kind of cotton, in any construction. The most important of these are:

1) Extent of exposure of the cotton to caustic; degree of penetration.
2) Time of exposure to caustic, and distribution of this time between relatively slack and relatively stretched conditions.
3) Temperature and concentration of caustic.
4) Sequence of mercerizing with respect to other operations such as kiering and bleaching.

In studying these factors with improved luster as the main objective, reliance on absorption or accessibility tests, such as barium number, can be misleading. The guidance of physical measurements of optical properties, however, can usually lead to noticeable improvement in luster.

* A report of work done under contract with the U S Department of Agriculture and authorized by the Research and Marketing Act. The contract is being supervised by the Southern Regional Research Laboratory of the Bureau of Agricultural and Engineering Chemistry.

A Sookne

Arnold M Sookne is an assistant director of Harris Research Laboratories. He received his BS degree from Brooklyn College in 1935, and his MA degree from George Washington University in 1942.

Prior to joining the Harris Research Laboratories several years ago, he held research associateships at the National Bureau of Standards for the American Association of Textile Chemists and Colorists, the National Research Council and the Textile Foundation. His experience in these positions has been concerned with fibrous materials, and for the most part, textiles. His work and publications have largely been concerned with the effects of chemical modifications on the mechanical properties of fibers.

The Behavior of Optical Bleaching Agents On Cellulosic Materials

S N GLARUM and S E PENNER
Ciba Company, Inc

Although the physical and chemical properties of optical bleaches and their applications have been frequently presented in the literature, there seems to have been little utilization or recognition of the fundamental concepts underlying the behavior of optical bleaches on a fibrous, cellulosic substrate.

From theoretical concepts and empirical observations of fluorescent compounds in various systems it is apparent that there should be a fundamental relationship between the concentration of an optical bleach on a textile substrate and the intensity of the visible light which is emitted when the system is subjected to a suitable ultra-violet source.

Consideration of the experimental data obtained from applications of optical bleaches on cellulose indicates that the fluorescence-concentration relationships found to exist are consistent with certain theoretically derived mathematical expressions and analogous to other fluorescent compound-solvent systems. In addition, the adsorption isotherms resulting from the fluorescence-concentration data are also consistent with certain well established theoretical and empirical observations.

This fundamental aspect of the behavior of optical bleaches on cellulose is of practical importance for investigating the kinetics of exhaust applications, determining dyebath exhaustion values, and estimating visual whiteness on the basis of fluorescence measurements.

S N Glarum

Silvert N Glarum received a BA from Kalamazoo College in 1929, and PhD in chemistry from Brown University in 1933. From 1933 to 1937, he was an AATCC research associate, studying problems in vat printing. In 1937, he joined the Textile Development Division of Rohm & Haas Company and in 1947 became associated with Ciba. From 1947 to 1952, he was laboratory director and production manager of Ciba Products Corporation and since 1952, has been manager of the Scientific Division of Ciba Company, Inc.

The Practical Partial Acetylation of Cotton

EDMUND M BURAS, JR, ALBERT S COOPER, JR, EDMOND J KEATING and CHARLES F GOLDTHWAIT
*Southern Regional Research Laboratory**

Fibrous partially acetylated cotton was first prepared in England

* One of the laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, United States Department of Agriculture.

about 1900, but practical applications of outstanding properties of this material, heat and rot resistance, have been developed in the United States only recently, following the development of practical processes for its preparation at moderate cost. The Southern Regional Research Laboratory has worked out both batchwise and continuous processes. Fabric can be handled on stainless steel dye jigs, as used in cotton finishing plants, or on a newly developed continuous range; yarns may be treated in package form or continuously as warp; and raw stock may be handled in a raw stock dyeing machine. Well adapted for commercial use, the processes employ acetic acid and anhydride, with small amounts of perchloric acid as catalyst, to convert cotton into a new type of textile fiber. Data on the concentration of chemicals used, duration of treatments, temperature, and other conditions required for best results have been determined. Several commercial developments are based on these process.

E M Buras, Jr

Edmund M Buras, Jr, received his BS and MS at Tulane University where he conducted research in the utilization of his state's natural resources, particularly the unique combination of salt, sulfur, and natural gas available in some of the marsh areas near the Gulf of Mexico. Excepting tours of active Naval duty during World War II and in Korea, he has been with the Southern Regional Research Laboratory of the Bureau of Agricultural and Industrial Chemistry, U S Department of Agriculture, for the past eleven years in research work on the chemical properties of cotton fibers and the modification of their chemical and textile properties in the laboratory program on cotton utilization. Among the subjects on which he has made contributions are the phosphorylation of cotton, measurement of water absorbency, protection against microbiological deterioration, various laboratory apparatus, and other reports and views of his present topic, partial acetylation of cotton.

TEXTILE AUXILIARIES

Friday, September 18, 1953

New Silicone Finishes for Wool

F L DENNETT
Dow Corning Corporation

Certain silicones recently developed for the treatment of wool impart exceptional resistance to felting during laundering. Tests have shown less than 2% shrinkage on silicone-treated wool flannel after six accelerated one-hour launderings at 140°F. Without altering porosity, such a silicone finish improves water repellency and stain resistance, maintains a soft full hand and increases abrasion resistance of wool fabrics. This silicone treatment is easily applied from a solvent or water system just prior to the final finishing operation.

F L Dennett

Firth L Dennett is manager of the Fiber Treatment Section of the Product Engineering Laboratories, Dow Corning Corporation. He received his bachelor's degree in pulp and paper technology from the University of Maine and his master's degree from the New York State College of Forestry.

Mr Dennett has had considerable experience in th production of silicone fluids and resins with emphasis upon the development and evaluation of silicone finishes for textiles. He is the author of a number of technical papers and patents relating to silicone water-repellent finishes and treatments.

Polyvinyl Pyrrolidone — A Versatile Compound with Textile Use Potential

E C HANSEN and C A BERGMAN
Antara Division, General Dyestuff Corporation

PVP is one of the acetylene compounds GAF is manufacturing by Reppe high pressure and temperature technique. It has been found useful as a blood volume expander and as a protective colloid suspending agent for many drugs. It has the ability to solubilize and detoxify a wide variety of substances.

PVP is being extensively used for hair lacquers, in wave-set lotions, in hair-fixative preparations and is also of interest in the formulation of skin creams and pressure-dispensed shaving creams.

It has a strong combining action on certain dyestuffs and is an outstanding auxiliary for the stripping of colors particularly vat and sulfur dyes.

PVP has possibilities as a soil redeposition preventative for cross linkage with dyes in hydrophobic fibers and as a mordant for vat or sulfur dyestuff.

E C Hansen

Emil C Hansen is a department head and assistant to the technical director of General Dyestuff Corporation. He was graduated from Pratt Institute and Brooklyn Polytechnic Institute.

Mr Hansen has been engaged in the textile dyeing and finishing industries since 1917, and has a wide background in this field.

He is a member of several committees of AATCC.

Emulsion Polymers and Their Textile Applications

L SHAPIRO
American Polymer Corporation

A review of the fundamental principles of emulsion polymerization, tracing the effect of the many variables, including copolymer composition, emulsifying system, particle size, effect of these factors on molecular weight, chemical stability, mechanical stability, gloss, washability, etc, is presented along with a review of applications ranging from emulsifying agents and warp sizings to finishing agent, pigment-binders and nonwoven fabrics.

L Shapiro

Leonard Shapiro is in charge of the Textile Division, American Polymer Corporation. He received his bachelor's degree and master's degree at Massachusetts Institute of Technology, where he performed work and research under Professor E R Schwarz. He has been research and development director for several companies.

Mr Shapiro is the author of several papers on textile resins, shrinkage control processes, wetting agents, and other textile subjects. He is the author of a chapter on textile finishing in the "American Handbook of Synthetic Textiles."

Adsorption of Detergents in the Dyeing Process

LAWRENCE FLETT and LESTER F HOYT
National Aniline Division,
Allied Chemical & Dye Corporation

It is known that surface-active agents used for the leveling of dyestuffs tend to retard the dyeing process. This is explaned by several different theories, one of which assumes that there is a competition between the dyestuff and the detergent for particular positions with respect to the molecules which make up the fibers.

Tests were run to determine quantitatively the amount of syn-

thetic detergent adsorbed on wool at different stages in the dyeing process. Tests were made in which the detergent was applied to the wool before it was dyed, where both the detergent and dye were used together and where the wool was dyed and then treated with the synthetic detergent.

L F Hoyt

Lester F Hoyt, manager, New Products Division, National Aniline Division, Allied Chemical & Dye Corporation, is a graduate of Massachusetts Institute of Technology receiving his BS degree in 1913 and his MS in 1915. He has devoted his time for many years to application research on, and development of new uses for, synthetic detergents. Author or co-author of about 30 scientific papers in various fields, Mr Hoyt is the holder of several patents on soaps and detergents.

Antistatic Finishes for Textiles

M HAYEK
Jackson Laboratory, E I du Pont de Nemours & Co, Inc

The fundamentals of static electricity on textiles are reviewed, and the mechanisms of antistatic action are described. To be generally effective, antistatic agents must reduce the electrical resistance of textile surfaces. The manner in which the electrical resistances of fibers are decreased by various compounds, particularly the commonly used antistatic agents, is discussed.

The requirements and properties of antistatic finishes needed for the manufacture of fibers and fabrics and for the treatment of consumer articles are discussed.

M Hayek

Mason Hayek received his undergraduate training at the University of Minnesota and his master's and doctor's degree at Indiana University. He has been with Du Pont's Jackson Laboratory since 1947, and has been engaged in a number of fields of research, including the development of textile chemicals.

In collaboration with Dr F C Chromey, also of Jackson Laboratory, he has had previous papers published in the *American Dyestuff Reporter* on the subject of static electricity on textiles, one of which ("The Measurement of Static Electricity on Fabrics") won the first annual American Dyestuff Reporter Award in 1951.

Executive Committee —

(Concluded from Page P565)

Walter T Meinert
Emery Industries, Inc

R Norris Shreve
Purdue University

Dining

FRANK F MYERS, *Chairman*
Geigy Company, Inc

Arthur A Barker

Frank F Beverly
Joanna Western Mills

Roger G Carr
Geigy Company, Inc

Boyd F Vaughan
E I du Pont de Nemours & Co, Inc

Publicity

JACK G KELLEY, *Chairman*
E I du Pont de Nemours & Co, Inc

James E Dempsey
E I du Pont de Nemours & Co, Inc

Walter H Jaeger
American Cyanamid Company

Thomas J Ratajczak
Althouse Chemical Co

William C Snead
Textileather Corp

Herbert E Tetzlaff
Geigy Company, Inc

Leroy C Voss
Geigy Company, Inc

Personnel

HAROLD C CHAPIN
AATCC

Alumni Luncheon

ARTHUR T BRAINERD, *Chairman*
Ciba Company, Inc

William Boyd, Jr
(Massachusetts Institute of Technology)

Herman Boxser
(Bradford Durfee Technical Institute)

Frank F Myers
(Georgia Institute of Technology)

Robert J Olson
(Philadelphia Textile Institute)

Elmer Scharf
(New Bedford Textile Institute)

William P Welch
(Lowell Technological Institute)

Ladies Program

Thursday, September 17th

4:00 to 6:00 pm—COCKTAIL PARTY—Private Dining Room 1, Conrad Hilton Hotel; meet in Parlor 4

Friday, September 18th

7:30 am—BREAKFAST CLUB—Morrison Hotel; program from 8:00 to 9:00 am

10:30 am—HOME FURNISHINGS TOUR—Merchandise Mart, approximately 45 minutes

12:30 pm—LUNCHEON AND FASHION SHOW—Citro's Restaurant, 3 hours

Saturday, September 19th

10:30 am—PLANETARIUM—meet at 10:30; program at 11:00; 1 hour

A book of tickets, to include all activities, will cost $5 per person.

Chicago
THE CONVENTION CITY

Michigan Avenue Bridge. The Wrigley Building is at the left and the Tribune Tower, at the right.

Chicago skyline from Lake Michigan. The Conrad Hilton Hotel is at the extreme left.

Buckingham Fountain, Grant Park on the Lake Shore.

CHICAGO, scene of the 1953 National Convention, lies at the foot of Lake Michigan; it is the largest city of the Midwest and the fourth largest in the world. Its recorded history begins with the first exploration by Louis Joliet, who was commissioned by the governor of New France in 1673 to pioneer the upper reaches of the Mississippi. Joliet, together with Father Jacques Marquette, opened a new empire that was to be a bone of contention between Great Britain and France for a hundred years to follow.

A year after his first visit Father Marquette returned to establish a mission for the Indians. Then followed a series of intermittent visits by explorers and trappers, with the French still in domination until 1759, when the British, aided by the colonists, conquered New France only to find themselves driven from the Chicago area by George Rogers Clark and his rebel forces a few decades later.

In 1795 the United States government, by a treaty with the Indians, acquired title to a plot six miles square at the mouth of the Chicago River. Here Fort Dearborn was built in the years 1803-1804 at which time there were several traders' cabins in the area. The first permanent house was a log cabin built about 1779 by Jean Baptiste Point de Saible, a native of Santo Domingo. In 1804, John Kinzie, a Scotch Canadian, established himself in the cabin formerly owned by de Saible; this later served as the first post office. In 1812 the Fort was ambushed by Indians and burned and for several years after the region was desolate. The Fort was rebuilt in 1816 and permanently abandoned in 1836.

After the Black Hawk War the Indians moved west of the Mississippi and there was no further danger from them. On August 10, 1833 the settlement of 550 inhabitants was incorporated as a town; four years later there were over 4000 people and the town received a city charter. The real growth of the city began in 1847 when the first railroad line, the Galena and Chicago Union Railroad, was begun. Five years later the Michigan Central and the Michigan Southern entered the city and communication with the east was established. During the Civil War the population of the city expanded from 109,260 in 1860 to 298,977 in 1870.

In the fire of October 9, 1871 the loss of property was about $200,000,000 with 17,000 buildings destroyed. New buildings, better than the old, soon went up and one of the first large construction projects was the exposition building on the lake front where the Art Institute now stands, housing the Interstate Industrial Exposition. During the eighties and nineties electric lights and telephone service were introduced, the first cable car was operated, the Board of Trade Building was completed, Hull House was founded by Jane Addams, and the World's Columbian Exposition took place in the summer of 1893 in Jackson Park on the lake front. There were over 27,500,000 admissions to the exposition from May to November.

Notable events after the turn of the century included: 1900, opening of the drainage canal; 1901, operation of electric railroads; 1906, first electric surface cars operated on Clark Street; 1908, 947 miles of railway tracks entering the city elevated; 1909, Chicago Plan Commission created; 1911, Chicago and Northwestern Railroad station opened; 1916, Navy pier completed; 1918, first air mail arrived; 1921, construction started on new Union Station; 1927, Municipal Airport opened; 1933 and 1934, A Century of Progress Exposition, with almost 39 million admissions in two years.

There is much to see and do in present-day Chicago for the visitor—so much, in fact, that the Convention Committee has left Thursday and Friday evenings and Saturday afternoon open for this purpose. Among the items of interest are: Buckingham Fountain, Museum of Science and Industry, Museum of Fine Arts, Chicago Natural History Museum, Merchandise Mart, Board of Trade Grain Market, and the Stockyards. It has been said that there is more to do in Chicago after 4 am than in Paris. Full details about what to do and what to see will be available at an Information Booth at the Convention.

Mid-West Section——

FUNGICIDES IN TEXTILES AS SALES-PROMOTION TOOLS*

CHARLES C YEAGER
Technical Director, Scientific Oil Compounding Co, Inc
Chicago, Ill

PRIOR to World War II fungal deterioration of textiles had received but little attention. During the early stages of the war in the Pacific, however, the need for fungicidal protection became very pressing. Procurements went into high gear, and many textile manufacturers and finishers were forced to re-equip themselves with new machinery to apply the specified fungicides. Those engaged in the program can vouch for the numerous problems that had to be met. Various fungicides prescribed by governmental agencies were improperly formulated for application, equipment was ruined by misuse, plant personnel complained because of fumes——or still worse ——skin disorders. To top all these problems, many manufacturers, after shipping treated materials to procuring agencies, suffered rejections due to improper application or to ineffectiveness of the treatment. Small wonder that many manufacturers acquired an extreme distaste for future fungicidal work. With the end of war-time procurements the textile industry as a whole breathed a sigh of relief, and promptly forgot fungicides in the process of retooling and reorganizing for old-time civilian production.

Fortunately, the breathing spell created by the governmental procurement slowdown gave the chemical industry time to conduct extensive research work on new fungicides, and the reformulation of old ones. And time was of the essence. With literally hundreds of chemical products on the market which possessed known fungicidal characteristics of varying degrees of efficacy, it was no small task to segregate those that had enough merit to be classed as good fungicides.

CHARACTERISTICS OF GOOD TEXTILE FUNGICIDES

Before a fungicide can be considered completely satisfactory for use as a textile finish, it must have the following characteristics:

1) Good stability.
2) High efficacy.
3) Low toxicity.
4) Inoffensive odor.
5) No color change.
6) Good hand.
7) No chemical effects on the fabric.

* Presented at the Hotel Bismarck in Chicago on Feb 14, 1953.

C C Yeager

A good fungicidal agent for the treatment of textile products, especially cellulosic textiles, should possess the following properties: stability, efficacy, freedom from toxicity, freedom from odor, freedom from color, good hand, and freedom from damaging chemical effects on textiles. The author discusses the importance of these characteristics of a good textile fungicide and lists the extent to which different presently available commercial products meet these requirements.

Textiles treated with a good fungicidal agent have the following advantages in use: increased life, better sanitary properties, better wear resistance, freedom from a tendency to develop musty odors, and freedom from a tendency to develop mildew stains in use. The author finally gives an extensive list of textile products for mildew resistance and exhorts textile finishers to promote sales through the use of fungicides on textiles.

STABILITY——*Stability* is determined by resistance to heat, light, ultra-violet rays, and oxidizing agents. Very few chemical compounds possess all these characteristics. The fungicide must be stable as a compound and also when applied to the fabric. It must be stable not only for the estimated life of the finished goods, but must retain its stability through long periods of storage.

EFFICACY —— *The efficacy may be either fungistatic or fungicidal.* A large number of products possess good fungistatic qualities——they prevent the germination of fungus spores,——or they are fungicidal —— they actually destroy the spores before they can germinate and damage the fabric. Moreover, the compound must be effective in relatively small percentages, so as to enable the user to retain low-weight add-on, and also to keep the cost within reasonable limits.

TOXICITY——*It must be nontoxic or of an extremely low order of toxicity.* This is one of the most essential requirements of a good fungicide. The civilian market differs from governmental procurements in one important aspect——the manufacturers exercise no control over the use of their products. Whereas, for instance, government agencies can insist that a man wearing a treated pair of shoes always wear hosiery, the manufacturer of civilian goods has no such means of protecting his customers. He may suggest, he may warn, but he cannot order. He therefore must operate on the assumption that his product may come into intimate skin contact or, in the case of small children, even be placed into the mouth. This puts the responsibility squarely on the shoulders of the manufacturer. He must be sure that his fungicide meets low toxicity requirements, and choose among the very few compounds which are low enough in toxicity to permit their indiscriminate use.

ODOR——The fungicide must not impart an unpleasant *odor* to the end item, particularly if it falls into the wear-apparel class. A number of fungicides possess unpleasant odor characteristics, while others are entirely free from this objectionable feature.

COLOR——If *color* is of importance to the sale of the product, the fungicide must not discolor the treated material. This characteristic presents no great obstacle, particularly in the treatment of dyed goods, since dye adjustments easily overcome any color changes caused by the fungicide.

HAND——The fungicide must not significantly change the *hand* of the fabric, especially if the fabric is to be used in the manufacture of wearing apparel. A harsh hand would do much to discourage wide civilian acceptance.

CHEMICAL EFFECTS —— The fungicide must have no adverse *chemical effects* on the fabric processed. The tensile strength of the fabric must be maintained through long periods of use under all types of conditions. A large group of

Figure 1
Portion of treated and untreated sock showing the effects of a good fungicide in preventing the growth of Trichophyton interdigitali, one of the most common organisms associated with athlete's foot.

treatments, although effective as fungicides, significantly lower the tensile strength of the fabric, some immediately upon treatment of the fabric,——as in the case of acidulation of cellulose —— and others when exposed to sunlight——as in the case of copper naphthenate and the halogenated phenolics. Research work pertaining to this problem is described in Summary Technical Report of the National Defense Research Committee entitled *Tropical Deterioration of Equipment and Materials, Volume I, 1946.*

In Table I are listed the most common fungicides now used in the textile field, and the characteristics of each compound with regard to the above factors.

Considering the many stumbling blocks in the way, it is understandable that industry was hesitant to turn its attention to the manufacture of fungicided fabrics for civilian use. Some of the fungicides available during World War I contaminated the equipment, and expensive cleaning operations were necessary before it could be used for other finishes. The special equipment required had involved considerable capital expenditures, and its further use could only be justified by large orders, which were not in immediate sight. Altogether the outlook for fungicided civilian products was not too promising.

ADVANTAGES OF FUNGICIDED FABRICS

Nevertheless, some farsighted manufacturers, profiting by the experiences of the armed forces, envisioned big devlopments along this line, but bided their time. This time came when the situation was radically changed through the discovery of improved fungicides, and better formulations of old ones. In the hands of skillful formulators, who knew how to prescribe or adapt the proper fungicide for each special purpose, application was simplified, and the necessity for major changes was obviated; so were costly cleaning operations. Pessimistic views were revised, and hopeful vistas appeared in the offing. It was realized that, when government orders would become practically extinct, civilian goods would dominate the field, and that fungiciding would greatly enhance their sales. The underlying reasons for the bright prospects were plain. Fungiciding 1) prolongs the life of fabrics, 2) increases their sanitary aspect, 3) strengthens their wear resistance, 4) obliterates musty odors, and 5) prevents staining. This impressive array of favorable factors was bound to have a powerful sales appeal. Some enterprising firms who tested the market with fungicided fabrics were rewarded by startlingly higher sales figures, and were encouraged to extend the scope of their operations.

The five factors cited, which play an important part in the appeal of fungicided fabrics, warrant a more detailed discussion.

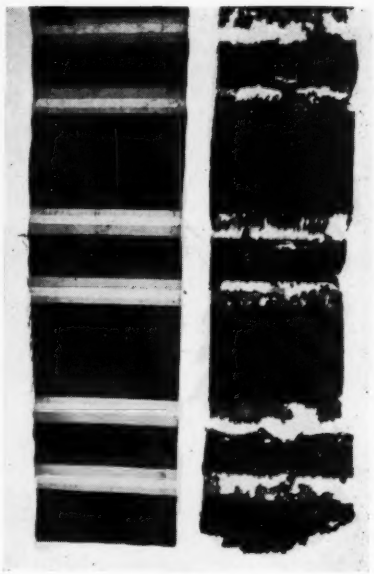


Figure 2
Treated and untreated awning fabric exposed in humidity chamber after inoculation with common cellulose rotting organisms.

TABLE I
PROPERTIES OF COMMERCIAL TEXTILE FUNGICIDES

Fungicide	*Stability*	*Effectiveness*	*Toxicity*	*Odor*	*Color*	*Fabric Hand*	*Chemical Effects*	*Remarks*
copper ammonium carbonate	Good	Fair	Low	OK	Blue	OK	None	
copper naphthenate	Good	Good	Low	Strong unpleasant	Green	Stiffens	Severe	Accelerates oxidation of cellulose in sunlight.
copper-3-phenylsalicylate	Good	Fair	Low	OK	Brown	OK	None	
copper-8-quinolinolate	Excellent	Excellent	Very Low	OK	Greenish yellow	OK	None	
dihydroxydichlorodiphenylmethane	Fair	Good	Low	OK	Slight	OK	None	
rosin amine D acetate	Fair	Fair	Too high for safety	OK	Slight	Harsh	None	
rosin amine D pentachlorophenate	Good except in sunlight	Very Good	Very Low	OK	Slow darkening	Slight stiffening	None	
salicylanilide	Fair	Poor	Low	OK	Slight	OK	None	
zinc dimethyldithiocarbamate and zinc -2-mercaptobenzothiozole	Good	Good	Very Low	OK	Slight	OK	None	
orthophenylphenol	Poor	Fair	High	Slight phenolic	Slight	OK	None	
pentachlorophenol	Poor	Very Good	High	Slight phenolic	Slight	OK	Severe	Accelerates oxidation of cellulose in sunlight.
sodium pentachlorophenate	Poor	Good	High	Slight phenolic	Slight	OK	Severe	Accelerates oxidation of cellulose in sunlight.
tetrachlorophenol	Poor	Very Good	High	Slight phenolic	Slight	OK	Severe	Accelerates oxidation of cellulose in sunlight.
phenyl mercuric salts	Very Poor	Good	Very High	OK	Slight	OK	None	

Figure 3
Treated and untreated seine twine exposed in humidity chamber after inoculation with common cellulose-rotting organisms.

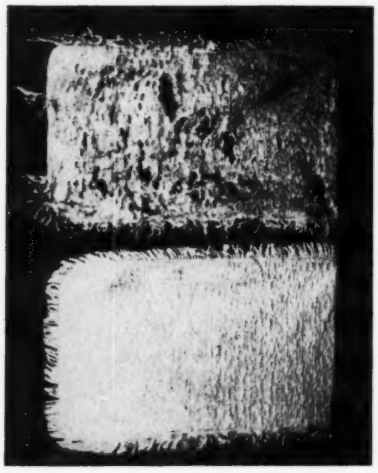


Figure 4
Untreated and treated bath mats exposed in humidity chamber after inoculation with common cellulose-rotting organisms.

Figure 5
Untreated and treated thread exposed in humidity chamber after inoculation with common cellulose-rotting organisms.

1. INCREASE IN THE LIFE OF THE FABRIC——At first glance this point seems to work against the interest of the manufacturer, as greater durability apparently works toward reduced sales. The pioneers in the field discovered that the contrary was true; that, as a matter of fact, consumers are becoming more and more fungus conscious, demand a longer life for what they buy, and are willing to pay for it. They also discovered that, if this demand is not met by one industry, it will be met by another. In some fields, for instance, synthetic fibers presented a challenge to cotton, because of their greater durability, but when the cotton goods were fungicided, this threat was completely overcome. Another example pertains to fabric awnings. If the manufacturers of this type of awnings had refused to prolong the life of their products in fear of smaller sales, they might eventually have had no sales at all. That people are willing to pay a premium for fungicided goods was proved to the satisfaction of one large-scale distributor of tarpaulins. He offered to his trade both treated and untreated tarpaulins of the same grade, and put a premium of 20% on the treated ones. The orders received were 4:1 in their favor, while total sales at the same time showed a substantial increase.

2. SANITATION——Products for which increased sanitation characteristics can be accomplished at little cost are rapidly forging to the front. The public has become so thoroughly convinced that sanitation in the home and in home furnishings is essential, that it is no longer interested in products for which no such claims can be made. A leading textile manufacturing concern, after extensive research work and sales promotion, and in conjunction with a large mail-order concern, developed a shoe liner, for which it received the "award of the year" from the National Foot Health Council. The demand for this product has far exceeded all initial predictions and expectations.

3. WEAR RESISTANCE——This factor is closely correlated to the life of the item. Most products suffer a slow but gradual loss in strength through wear and tear. Much of this is normal, but often a large part of it must be attributed to microbial deterioration. A good fungicidal treatment will retard that part of the tensile loss which is due to microorganism activity, thus improving the wear resistance of the product, and giving additional value to the buyer.

4. PREVENTION OF MUSTY ODORS ——Many consumer items are subject to use under conditions which encourage microbial growth. Most areas of the United States, Canada, and all of the tropics are subject to periods of high humidity and high temperatures, thus creating ideal conditions for mold growth. At these times common household items and even clothing take on a musty odor, which is objectionable. The use of a fungicidal treatment can prevent such odors for the life of the product, so that no matter how damp the product may become, it remains clean-smelling throughout its wear-life. This factor is very attractive as a sales point. The average consumer, although he may know nothing about microbial deterioration and may not understand all its implications, does know the offensive odor of mold, and appreciates any treatment which prevents it.

5. STAINING——The staining of wearing apparel and other consumer goods by mold organisms is familiar to everybody. Once such stains appear in a fabric, it is almost impossible to remove them without damaging the product. For many years fungicides have been used in preventing the staining of lumber by the wood industry. A similar treatment for textiles is highly desirable, especially as it is economically feasible. The sales psychology for such a program is evident, because it strikes home to the pocketbook of the real budgeteer, the housewife.

SALES PROGRAM——The first step for the manufacturer to follow in the development of a sound sales program for mildew-resistant products is the ascertainment of the demand in his particular field. Many products now on the market lend themselves to this type of program with little or no capital outlay. It is of course much easier and less expensive to meet an established demand than to create a new one. However, a careful examination of the field will reveal, surprisingly enough, a far greater consumers' interest than the industry as a whole seems to realize. In other cases preliminary publicity and missionary work will quickly arouse public interest and may lead to an insistent demand for other mildew-resistant products. In still other cases, after consumer interest has been established, the manufacturer will recognize that, by increasing his outlay for research, for additional equipment and for trained personnel possessing the proper know-how, he can establish new markets which heretofore never existed. As consumer interest quickens, it adds momentum to the over-all sales program and business growth. This trend has already been experienced by those who have made aggressive stabs at this vast and undeveloped field. Cotton and wool producers have been under increasing pressure from synthetic-fiber manufacturers and

see business slip away, because their product lacks the durability on which the public insists. And yet they have at their fingertips tools which can stop, and in many cases reverse, this decline. People still prefer the soft, flexible warm characteristics of cotton, and are only too willing to buy it, if they can obtain it with a durability equal to that of synthetic-fiber materials at no great increase in cost. A large Canadian awning manufacturer recently advised his technical staff that synthetic-fiber products and metal awnings were cutting into his business so sharply that, unless he could add greater durability to his awnings, he would be forced to abandon their manufacture. The solution of the problem proved surprisingly simple. By availing himself of the services of a competent formulator, a fungicidal product was developed which placed the awnings on a favorable competitive basis. They now possess the durability required of them and are produced at far lower cost than the products that had threatened his market.

As the demand for longer-lasting, more sanitary and generally better products increases, enlightened industry will look toward new horizons, new ways in which to take advantage of these newly developed sales tools. A vast potential is evidenced by the following, necessarily incomplete, list of products on which work is already being done, or in which work should be done to satisfy a mold-conscious public.

Some products which offer great possibilities along this line may be grouped under the five general headings previously mentioned as the factors with the greatest sales appeal. For obvious reasons some of the products are listed under several headings.

LIST OF FUNGICIDED TEXTILE PRODUCTS

Increase in life
- rope
- awnings—woven and striped
- tents
- canvas cots
- food bagging
- fire hose
- tarpaulins
- beach and lawn furniture
- shower curtains
- artificial leather
- thread
- sporting equipment
- binder and other farm canvasses
- fish and other sport netting
- sash and blind cords
- convertible tops
- tobacco seed-bed and shade covers
- electrical utility equipment

Sanitation
- shoe liners
- canvas shoes
- sausage twines
- rugs
- hosiery
- personal belting
- bath mats

Wear resistance
- tire cords
- shoe lacings
- fabric coverings for wire

Prevention of Odors
- rug backings
- upholstery materials
- canvas shoes
- luggage lining

Staining
- clothing
- upholstery coverings
- shower curtains
- fabric wall coverings
- cloth shoes

This is only a brief and incomplete list of items, the sale of which could be extended far beyond their present market by the addition of a good fungicidal treatment.

CONCLUSION

A successful treating program requires attention from and hearty co-operation among the textile manufacturer, the fabricator, the distributor and the formulator. All four play an important role in utilizing the promotional tool which is in their grasp and which can enlarge consumer demand.

Certain pitfalls, if not properly recognized, may prove detrimental to successful sales and should not be overlooked. Too often the textile manufacturer wants the impetus to start at the fabricator level, or the fabricator waits for the demand to come from the distributors or general public. Under such conditions the program may never quite get under way. So far the most successful sales programs in the fungicide field were accomplished through complete co-operation of all four parties concerned. In one instance a textile manufacturer, working hand in hand with the formulator, developed the idea and sold it to the fabricators and the mail-order houses. In another instance a leading mail-order house conceived the idea and encouraged its development on the manufacturing level. Both programs were equally successful and lucrative to all concerned.

As the textile industry re-evaluates its present-day products, some will stand out as ideal for the promulgation of a fungicidal application program. The market potenial should be examined, the pulse of the public taken and then, with the combined efforts of manufacturer, fabricator, fungicide formulator, and salesman, the use of this new tool is certain to result in new consumer outlets, larger sales, and greater profits for all.

CALENDAR

COUNCIL
1953—Sept 17, Nov 20.
1954—Jan 27, Apr 30, June 15, Sept 15, Nov 19.
1955—Jan 21, Apr 15, June 17

NATIONAL CONVENTIONS
September 17-19, 1953 (Hotel Conrad Hilton, Chicago); Sept 15-18, 1954 (Atlanta Biltmore, Atlanta, Ga); Sept 21-23, 1955 (Chalfonte-Haddon Hall, Atlantic City, N J).

NEW YORK SECTION
Sept 25, Oct 23, Nov 20 (Swiss Chalet); Jan 29, Feb 26 (Hotel Statler, N Y); April 23, 1954, May 21, 1954 (Swiss Chalet).

MID-WEST SECTION
November 7, February 13 (Hotel Bismarck, Chicago, Ill.)

NORTHERN NEW ENGLAND SECTION
Nov 6 (LTI); Dec 4 (MIT Faculty House).

PACIFIC SOUTHWEST SECTION
Nov 20, Jan 29.

PIEDMONT SECTION
Jan 30 (Hotel Poinsette, Greenville, S C); Apr 10 (Hotel Roanoke, Roanoke, Va); June 11-12 (Outing, Mayview Manor, Blowing Rock, N C); Sept 11 (Hotel Barringer, Charlotte, N C).

PHILADELPHIA SECTION
Sept 11, Oct 23 (Penn-Sheraton Hotel, Philadelphia, Pa); Dec 4, Jan 15 (Kugler's Restaurant).

PIEDMONT SECTION
Sept 12 (Hotel Charlotte, Charlotte, N C).

RHODE ISLAND SECTION
Oct 23 (Prov Eng Soc); Dec 4 (Annual Meeting, Sheraton-Biltmore, Providence).

SOUTH CENTRAL SECTION
Dec 5 (Patten Hotel).

SOUTHEASTERN SECTION
Sept 5 (Ralston Hotel, Columbus, Ga).

WESTERN NEW ENGLAND SECTION
Oct 2, Nov 6 and Dec 11 (Rapp's Restaurant, Shelton, Conn).

EMPLOYMENT REGISTER

This column is open for two insertions per year, per member, without charge. Blanks can be obtained from and filed with, the Secretary of the Association, Lowell Textile Institute, Lowell, Mass. It is understood that these will be open to inspection by prospective employers who can obtain further information from the Secretary

53-18

Education: chemistry and dyeing, night classes; and business administration.
Experience: textile laboratory technician.
Age: 25; married; references; position as assistant dyer or laboratory technician desired, southern New England or California. 8-17, 8-31

53-19

Education: one year of college.
Experience: laboratory technician and overseer of yarn dyeing.
Age: 26; married; references; position as overseer of dyeing desired, on east coast, preferably south. 8-31, 9-13

RHODE ISLAND SECTION OUTING • JUNE 12, 1953

Photos by Kenneth C Everett

BIBLIOGRAPHY OF FIBER ANALYSIS (1948-53)

E M LYNCH, *Chairman*

Agster, A. Polyamide mixture yarns: quantitative analysis (in admixture with cellulosic fiber). *Textil-Praxis 4*, 138-9 (1949); abst *J Textile Inst 40*, A377.

Agster, A. Quantitative analysis of fiber mixtures. *Textil-Praxis 4*, 504-8 (1949); abst *J Soc Dyers Colourists 66*, 254 (1950).

AATCC. "Analytical Methods for a Textile Laboratory," 220-250 (1949).

AATCC. Identification and quantitative separation of textile materials. *Technical Manual and Year Book*, 115-127 (1953).

ASTM. Quantitative analysis of textiles. "Standards on Textile Materials", 92-104 (1952).

ASTM. Standard methods of identification of fibers in textiles. "Standards on Textile Materials, 70-88 (1952).

Anon. Identification of fibers (use of a stain). *Tech Bull (Du Pont) 8*, 192-9 (1952).

Antoniotti, M. Nylon, Perlon, and Vinyon: quantitative analysis in mixture yarns. *Mondo Tessile 3*, 284-8 (1948); abst *J Textile Inst 43*, A742. (1952).

Bennett, R D. Determination of nylon content in fiber mixtures. *Can. Textile J 66*, #11, 58-9, 71 (1949).

Bobeth, W. Microscopic reactions for the identification of polyester fibers. *Faserforsch u Textiltech 4*, #2, 45 (1953); abst *Brit Rayon & Silk J 30*, #349, 66, 68.

Boyce, E A W. Identifying textile fibers for dyeing. *Am Dyestuff Reptr 39*, 292 (1950).

Clasper, M and Haslam, J. Nylon and related polymers: analysis. *Analyst 74*, 224-37 (1949); abst *J Textile Inst 40*, A465.

Draxl, H. Rapid identification of fiber classes in mixed spun yarns and fabrics (staining test). *Textil-Rundschau 4*, 347-51 (1949); abst *J Textile Inst 41*, A306 (1950).

Fisher, D C and Roberts, E D. Analysis of staple fiber mixtures. *Textile Research J 22*, 509-12 (1952).

Ford, J E and Roff, W J. A scheme for fiber identification. *Dyer 107*, 211 (1952).

Hall, A J. New fiber staining techniques to determine fiber structure. *Fibres 12*, 83-4 124-5 (1951).

Heim, O. Separation of cotton and rayon or cotton and acetate for analytical purposes. *Anal Chem 22*, 360 (1950); *23*, 1314 (1951).

Heyn, A N J. How to identify fibers by their x-ray diagrams. *Rayon Synthetic Textiles 31*, #9, 39-43; #10, 42-6 (1950).

Heyn, A N J. The identification of synthetic fibers by their refractive indices and birefringence. *Textile Research J 23*, 246-51 (1953).

Heyn, A N J. Observations of the birefringence and refractive index of synthetic fibers with special reference to their identification. *Textile Research J 22*, 513-22 (1952).

Hilton, C L. The analysis of cotton-glass-asbestos yarn. *Textile Research J 23*, 401-4 (1953).

Houghton, F D. Synthetic fibers: microscopy and identification. *Tappi 34*, 353-6 (1951); abst *J Textile Inst 43*, A432 (1952).

Jafflin, Mlle. Separation of silk-nylon mixtures and determination of the two constituents. *Bull Inst Textile France* #13, 19-21 (1949); abst *J Soc Dyers Colourists 67*, 208 (1951).

Keggin, J F. Identification of Ardil in mixtures. *Brit Rayon & Silk J 28*, #326, 53 (1951).

Koch, P-A. Chemical fibers: recognition and differentiation of the various types. *Textil-Rundschau 7*, 273-7 (1952); abst *J Textile Inst 43*, A834.

Lanczer, J. Determination of nylon in mixtures with cellulose. *Textil-Rundschau 5*, 92-4 (1950); abst *J Soc Dyers Colourists 66*, 462.

Ludewig, H. Distinguishing between Perlon and nylon. *Faserforsch u Textiltech 3*, 354-6 (1952); abst *J Textile Inst 44*, A219-20 (1953).

Mauer, L and Wechsler, H. Fiber identification (table). *Modern Textiles 34*, #5, 65-6 (1953).

Mhatre, S H and Tawde, G P. The quantitative separation of fiber mixtures by flotation. *J Textile Inst 44*, T70-75 (1953).

Michaud, J. Identification of modified viscose rayon. *Can Textile J 67*, #8, 72-6 (1950).

Norwick, B. The rapid identification of fibers by the Christiansen effect (using a liquid having a similar refractive index). *Textile Research J 23*, 259-61 (1953).

Patterson, A N. Specialty hair fibers: how to identify them (includes mohair, camel, llama, cashmere, guanaco, vicuna, etc). *Rayon Synthetic Textiles 31*, #11, 41-3 (1950).

Pinte, J and Jafflin, Mlle. Quantitative analysis of wool-silk mixtures with cupric ethylenediamine. *Bull Inst Textile France* #12, 23-28 (1949); abst *J Soc Dyers Colourists 67*, 208 (1951).

Preston, J M. Identification of fibers. *J Textile Inst 41*, P679-91 (1950).

Preston, J M. The temperature of contraction of fibers as an aid to identification. *J Textile Inst 40*, T767-8 (1949).

Preston, J M and Nimkar, M V. The use of density gradient tubes in fiber studies and their application to the analysis of fiber mixtures. *J Textile Inst 41*, T446-54 (1950).

Preston, J M and Saha, H. Froth flotation of fibers (as an analytical method for fiber mixtures). *J Textile Inst 40*, T381-8 (1949).

Preston, R and Warburton, N. A method for the quantitative determination of Ardil in admixture with wool. *J Textile Inst 44*, T298-305 (1953).

Reif, W. Identification of Orlon and differentiation of nylon and Perlon. *Textilber 34*, 219 (1953); abst *J Soc Dyers Colourists 69*, 272.

Reinhold, R. Rapid identification of nylon, Perlon, and other artificial fibers. *Kunstseide u Zellwolle 26*, 7-8 (1948); *Chem Abstracts 44*, 6628-9 (1950).

Royer, G L. Identification of synthetic fibers by microscopical and dye staining techniques. *Paper's AATT 8*, 32-40 (1952).

Salquain, J. Dyeing and identification of artificial protein fibers. *Teintex 15*, 525-9 (1950); *Chem Abstracts 45*, 3159 (1951).

Sassi, D. A rapid method of identification of textile fibers in blends. *Am Dyestuff Reptr 42*, 236-40 (1953).

Stoves, J L. 1) Fiber identification and detection of damage. 2) Microscopical and biological examination. *Textile Inds & Fibres 13*, 148-51, 218-20 (1952).

Textile Institute. Identification of textile materials (long; all fibers, including an analytical scheme). *J Textile Inst 42*, S25-116 (1951); reprinted in book form (3rd edition, 1951).

Ulrich, H M. Distinguishing synthetic fibers from each other and from other fibers (review). *Textil-Praxis 7*, 150-4, 211-15 (1952); abst *Am Dyestuff Reptr 41*, 748.

Wilson, W R. A systematic scheme of fiber analysis by solvent action. *Papers AATT 8*, 29-31 (1952).

Wilson, W R. Use of solvents in fiber identification. *Can Textile J 69*, #22, 75-7 (1952).

Wolf, H W. Quantitative determination of nylon, Orlon, and Fiber V (Dacron) in wool blends. *Am Dyestuff Reptr 40*, 273-6 (1951).

Zahn, H and Wolf, H. Chromatographic analysis of polyamides and polyurethanes (nylon, Perlon). *Textilber 32*, 317-21 (1951); abst *J Soc Dyers Colourists 67*, 356.

Zill, H. "Zillo Test": apparatus for identifying synthetic fibers (using a series of seven specific solvents). *Textilber 33*, 453-4 (1952); abst *J Textile Inst 43*, A653.

R I Section Outing Attracts Large Crowd

UNDER the chairmanship of Hugh Goerner, the 20th Annual Outing of the Rhode Island Section attracted a large gathering to the Wannamoisett Country Club, Rumford, R I on June 12th.

Committeemen aiding Mr Goerner included the following: *Prizes*—D Eccleston and A Hustwit; *Dinner*—H Gorton and H Travis; *Golf*—D Payne and A Rant; *Printing* — R Thomas; *Photography* — K Everett; *Donations and Tickets* — A N Graves; *Publicity*—A Lombard.

(Outing photos on preceding page)

Piedmont Section Annual Meeting

THE Annual Meeting of the Piedmont Section will be held at the Hotel Charlotte, Charlotte, N C, September 12th.

Neal Truslow will preside over the Research Meeting in the Tryon Room at 10:30 am. The afternoon technical session will feature R H Nuttall, American Aniline Products, Inc, who will speak on "The Dyeing of Naphthols."

At the evening banquet, Dr Charles E Mullin will be honored, this being the 25th anniversary of his chairmanship of the Section. Speaker of the evening will be W O Henley, treasurer of American Aniline Products, Inc.

Southeastern Section to Meet Sept 5

THE next meeting of the Southeastern Section will be held at the Ralston Hotel, Columbus, Georgia, September 5.

The afternoon technical session will start at 2:30 PM. Boyce C Bond, Pittsburgh Coke and Chemical Company, will discuss, "The New Bond Dyeing Machine" and James L Fisperman, Jr, Cabincraft, Inc, will speak on "The Development of Tufted Fabrics in the Textile Industry."

The evening session will consist of a dinner at the Ralston Hotel, after which the membership will see a color film with sound entitled "The Great New South." This film is sponsored by Delta Airlines.

APPLICATION OF FLUORESCENT AGENTS IN HYDROGEN PEROXIDE BLEACHING OF KNIT GOODS

J F WHALEN
Becco Sales Corp, Charlotte, N C

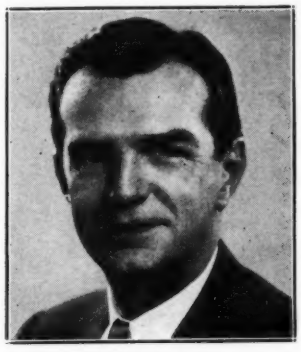
WITH the acceptance of, and the demand for, a fluorescent white, knit goods bleachers have been faced with the problem of applying the fluorescent agent uniformly. As often as not, attempts to apply it to bleached goods in kier, reel machine or pad resulted in non-uniform pickup and streakiness, because of physical difficulties in distributing the fluorescent agent evenly, and the chemical variation of bleached cloth.

Since the fluorescent agents are sensitive to pH, variations in shade as well as pH are the rule. Wide variations in pH exist on cloth that is not thoroughly washed after bleaching especially where acid is used to neutralize residual alkali. This is particularly true of cloth bleached and washed in the kier, and to a lesser degree to cloth kier-bleached and tub-washed. The shade change due to pH variation is difficult to detect between any two pH values but is readily noticeable between low, neutral and high pH conditions.

A system giving uniform results has been devised whereby a fluorescent agent may be applied to grey knit goods in a wetout saturator, prior to hydrogen peroxide kier bleaching. Grey goods are run through a saturator containing wetting and fluorescent agents, squeezed to 100% saturation, and loaded directly into the kier for normal peroxide bleaching. Where automatic kier loading equipment is available, saturated cloth is sluiced into the kier with the peroxide bleach solution. This usually contains 3 to 4% of hydrogen peroxide 35%, 3 to 4% of sodium silicate and 0.25% each of soda ash and a polyphosphate.

These percentages are based on cloth grey weight, and the chemicals are added to water in sufficient quantity to make up a 4 or 5 to 1 liquor ratio. When all the cloth is in the kier, circulation is continued for 20 minutes before the temperature is raised slowly to 190° F. Such a system thereby offers time-saving over that in which the wetting out is performed in the kier. A temperature of 190° F is maintained with continuous circulating for about six hours.

Two systems of adding wetting and fluorescent agents to the wetout saturator currently are being used successfully. In one, the saturator is filled with water to the operating level and brought up to strength with wetting and fluorescent agents. As the dry, grey cloth passes through the saturator it is squeezed to 100% saturation and an equivalent amount



J F Whalen

of water and chemicals are replaced. A constant water level in the saturator is important and is best maintained by means of a float-controlled water valve.

Chemicals in concentrated form are fed into the saturator at a rate based on chemical concentration plus speed and weight of cloth passing through the saturator. The rate of cloth passing through the saturator is limited only by the wetting efficiency, which offers no difficulties especially when the solution is heated to 140° F.

A 100% saturation figure is cited as being successfully used. Some variation of this figure is known to exist where constant squeeze-roll pressure and cloth speed is maintained with variation in unit-cloth weight. Under these conditions chemical feed rates are important and are closely regulated on a poundage rather than a yardage basis.

In the above system as well as the one which will be described below, the amount of fluorescent agent used varies according to the individual standard white. The amount of wetting agent also varies depending on its wettability, but is usually about 0.5 percent, based on the weight of the goods.

For example, in preparing to wetout a 4000 lb lot of grey knit cloth, using the above system, a 200-gallon saturator is made up as follows: 200 gallons of solution (weighing 1680 lb), should contain 8.4 lb of wetting agent, and for the sake of our example, 0.1% or 1.68 lb fluorescent agent. For convenience, a 30-gallon tank may be used and placed above the saturator to gravity feed to the 4000 lb of cloth (100% saturated) 20 lbs of wetting agent and 4 lbs of fluorescent agent. These amounts of chemicals are added to 30 gallons of water, and the solution added to the saturator by means of a one-eighth inch line and valve, at a rate based on the unit weight rate of cloth passing through the saturator. Valve calibration and regulation is necessary to accommodate changes in unit cloth weight and head tank pressure.

Another example: if 2 yd/lb cloth is being fed at the rate of 150 ypm or 75 lbs/min, the rate of flow of chemicals into the saturator should be 2108 cc's/min or 4.5 pints/min. A constant volume of 200 gallons is maintained in the saturator by means of a float-controlled water valve. Theoretically, the original 200 gallons of make-up solution remains in the saturator, and the 30 gallons of head-tank solution is exhausted when the run is complete. The saturator temperature is 140°F throughout the run.

In the second system, enough solution is made up in a head tank to fill the saturator and wet out the cloth. In the case of a 200-gallon saturator and 4000 lb of grey cloth, a head tank of 676 gallons is necessary. Using the chemical percentages above, 28.4 lb of wetting agent and 5.68 lb of fluorescent agent are required. The solution is heated to 140° F, and the saturator (filled either by gravity or by means of a pump) is kept to a constant level and temperature.

In this system the percent saturation is of prime importance, and squeeze-roll pressure should be maintained accordingly. Chemical feed to the saturator will depend on the rate of cloth through it and will be governed by the constant liquor level device.

Where one run directly follows another the saturator solution may be reused, and allowance is made in the head tank make-up accordingly. Where wetout ability is good at lower saturator levels, allowance may also be made for this in overall solution make-up, and the level allowed to drop accordingly. This is an economy measure undertaken where saturator draining is necessary after each run.

In either of the above systems of fluorescent agent application, results are equally good with cloth in open width or rope form. Further, non-uniformity has not been observed on cloth retained in the saturator for prolonged periods, i e, up to 30 minutes.

Reports from several mills using this system are very favorable. It is no longer necessary to rework streaked and non-uniform cloth. Cutting and sewing are no longer hampered with cloth matching operations, regardless of cloth style. This plus the facility of the system of application of fluorescent agent in knit goods bleaching makes it one to be recommended.

• PATENT DIGEST •

PAUL WENGRAF

WATER REPELLENT FINISH ——Alkyldichlorosilane plus Epoxybutene G 2, 02

U S Pat 2,615,824
(Secretary of the Army—Minor, Sookne, Harris, Pyle—10/28/52)

The preamble to this patent gives a resumé of the literature on water-repellent treatments based on siliconorganic compounds, beginning with the Patnode U S Pat 2,306,222.

The objects of the current method are 1) to develop a water-repellent treatment that will be carried out easily in conventional textile equipment and will offer resistance to laundering and dry-cleaning and 2) to incorporate substance that will prevent damage by acids liberated in the treatment.

It has been found that superior water resistance can be attained by immersing the textiles in a lower alkyl (methyl-, ethyl-, or propyl-) substituted dichlorosilane or dibromosilane. The general formula is

$$\text{Alkyl} - \overset{\overset{H}{|}}{\underset{|}{Si}} - Cl_2 \text{ or Alkyl} - \overset{\overset{H}{|}}{\underset{|}{Si}} - Br_2$$

A silicon resin is formed upon hydrolysis and subsequent condensation to resins. Suitable solvents include carbon tetrachloride or Varsol.

The acid liberated in this reaction can be neutralized by weakly alkaline substances, such as sodium bicarbonate, sodium acetate or the like, while stronger alkalies are unsuited for certain fibers. It has been observed, however, that there is no fiber damage when 3-4-epoxybutene $CH_2 : CH - CH - CH_2$ (with O bridging the 3,4 positions) is present in the alkyl dichlorosilane solution. In this event no other neutralizing agent need be applied. Hence, the use of epoxybutene is an essential part of the process.

Example (#7): a swatch of serge, preconditioned in an atmosphere of 95% humidity is immersed in a solution of 1.8% of monomethyl dichlorosilane, 95.8% of carbon tetrachloride, and 2.4% of epoxybutene. After the evaporation of the solvent in a fume hood, the swatch was rinsed, dried and cured at 110° C. Water repellency proved to be superior to that obtained by other treatments.

Among the references cited by the Patent Office:

U S Pat 2,469,625 (Dow Chemical/1949): a water-repellent finish may be obtained by using solutions of high substituted siliconchlorides, such as trilauryloxysilicon monochloride and the like; the process may be used for textiles as well as for metallic surfaces.

U S Pat 2,449,572 (Gen Electric/1948): small amounts of soluble metal salts of organic acids, especially Pb-, Mg-, Sn- and Co salts (e g, Co-naphthenate), are useful catalysts for polysiloxane resin formation.

U S Pat 2,412,470 (Gen Electric/1946): a mixture of trimethylsilicon chloride and silicon tetrachloride for water repellency.

Brit P 418,230 (I G Farbenindustrie/1934): organic high-chlorinated substances, such as chlorinated rubber solutions, mixed with ethylene oxide derivatives (of the glycide, epichlorohydrin, butadiene oxide, etc, types) are used to counteract the effect of liberated hydrochloric acid.

PRINTING AND/OR DYEING BY PHOTOGRAPHIC METHODS D, 1

U S Pat 2,616,803
(Ravich—Nov 4, 1952)

The present invention is based on the following principle: a photosensitive dye intermediate dissolved in an aqueous acid liquid is applied to the fabric by printing or padding after which the pertinent coupling agent is applied in isopropanol or other solvent solution. The addition of an acid component is optional.

It is essential that the intermediate be *insoluble in the solvent,* and that the coupling agent be insoluble in the resulting solution.

After the intermediate and the coupling agent are applied under alkali-free conditions, a pattern (photographic plate, screen or the like) is fixed on the fabric, which is thereupon exposed to strong actinic light. Immediately thereafter the fabric is passed through a moist ammonia atmosphere or through an alkaline solution until coupling takes place. It is suggested that the coupling reaction be promoted by elevated temperature.

Example: the aqueous solution may contain the copper sulfate double salt of diazotized dianisidine plus aluminum sulfate and boric acid. The coupling agent may be 2-OH-3-naphthoic acid in isopropanol.

It can be seen that this process is characterized by the use of non-aqueous solutions of the coupling agents, thus permitting a wider range of coupling substances.

Among the references cited by the Patent Office:

U S Pat 2,311,016 (Hartford Nat Bank & Trust/1943): a photographic printing process in which the material is impregnated with a stabilized diazonium compound and rubbed after drying with a finely powdered coupling component. A deep shade is obtained after light exposure.

U S Pat 2,298,444 (Eastman Kodak/1942): a diazotype printing process using derivatives of morpholine or other cyclic N-compounds as diazonium compounds and a naphthol dissolved in alcohol as a coupling agent.

U S Pat 2,037,542 (Kalle & Cie/1936): light sensitive materials for photographic printing, the sensitive diazonium portion being a diazotized benzylamino acylamine, and the coupling component, phloroglucinol or resorcinol.

Brit P 571,802 (Hall Harding Ltd/1945): a photographic printing process, which calls for the application of 1) a light-sensitive diazotype containing an acylamino group, but no other solubilizing (sulfonic) group, to obtain water solubility and 2) an insolubilizing compound, such as phloroglucinol.

Prior art in photographic textile printing methods has been discussed in *Am Dyestuff Reptr 40, 375,* 1951 (Digest to U S Pat 2,541,178).

FIRE RETARDANT AND HEAT INSULATING COMPOSITION——Urea Salt of Phenol Sulfonic Acid

U S Pat 2,616,866
(Pyrothron Development Corp—Juda—Nov 4, 1952)

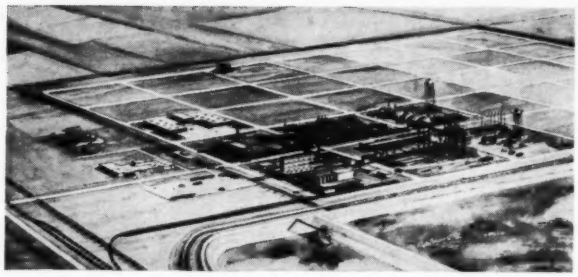
The object of the present invention is to protect material from fire by providing a fire retardant and potentially heat-insulating composition.

A combination that is claimed to produce the desired effect is prepared by reacting phenol with sulfuric acid and treating the reaction product with urea. The final substance may be neutralized with ammonia or other volatile bases; thereby keeping it free of inorganic compounds that may act as catalysts or possess other undesirable properties. Compositions of this type are said to be flame-resistant, forming upon combustion a "minutely porous structure of high insulating properties." Various proportions of phenolsulfonic acid and urea are said to be suitable for this purpose. The specification mentions, among others, mono-urea-mono (di or tri)-phenolsulfonate; di-urea phenol di (or tri-)-sulfonate and triurea phenol trisulfonate. Other phenols, cresols, etc, may also be used.

Example: phenol is sulfonated by adding 95.5% of sulfuric acid and a small amount of water to the melted products. The sulfonation produces a mixture of o- and p-phenol sulfuric acid. The reac-

(Concluded on Page 616)

NEWS



Construction of a new plant near Seadrift, Texas, has been undertaken by Carbide and Carbon Chemicals Company, a Division of Union Carbide and Carbon Corporation. Completion of the multimillion dollar plant is expected in about a year. This artist's sketch shows the general appearance and size. The Seadrift plant is a part of Union Carbide's expansion program for the increased production of ethylene oxide and polyethylene.

• U S Dyestuff Corp Changes Hands

It is reported that U S Dyestuff Corporation has changed hands with Newton H Sobin becoming the new president and treasurer. He succeeds John O'Day, former owner, who was associated with the firm for 50 years.

Other principals in addition to Mr Sobin, who also operates the New England Products Company, are: H I Belton, former Boston sales manager for American Aniline Products, Inc, executive vice-president and sales manager; and Joseph W MacNeil, former manager of the Philadeplhia Branch for American Aniline. Mr MacNeil will manage the Philadelphia office of the new firm.

The Company will continue to import and manufacture dyestuffs.

• Ohio Falls Name Change

Ohio Falls Dye and Finishing Works Company, Louisville, Ky, has changed its name to Ohio Falls, Inc. There is no change in ownership or management.

W I Wymond, president, points out that the shortening of the name is in line with the Company's modernization program. He feels it will make it easier, more convenient and faster for customers, suppliers and personnel.

The modernization program is embracing high-speed equipment, increased storage space, a larger research laboratory, and additional technical and sales personnel.

• First Hydrogen Peroxide Shipped from Memphis Plant

The first tank car of hydrogen peroxide manufactured by a new non-electrolytic process, a development of Du Pont research, was shipped on July 31st from the company's plant in Memphis, Tenn, to a southern textile mill, it was announced by Thomas D Bell, plant manager.

Mr Bell said that the new process, which has just gone into operation, already indicates that the performance demonstrated on a semiworks scale will be realized or exceeded in the commercial plant.

The Du Pont unit is the first hydrogen peroxide plant to be built in the south and is believed to be the largest single peroxide unit ever installed for peacetime operation. An important factor in the Memphis location is the company's desire to improve its service to the large southern textile and pulp industries, which are using increasing quantities of hydrogen peroxide in bleaching operations.

• Barrett Opens New Unit

The new Calumet (Chicago) phthalic anhydride plant of the Barrett Division, Allied Chemical & Dye Corporation is now in full operation. The unit, which cost $5,000,000 to construct, coupled with the production of a similar installation in Philadelphia, will eliminate the possibility of short supply for some years to come, according to T J Kinsella, president.

• Alliance Completes Expansion Program

Harold W Rose, president of the Alliance Color and Chemical Co, Newark, New Jersey, has announced the completion of an expansion program initiated by the Company in 1950. The plant is located on the site of the old Amalgamated Dyestuff Company, one of the original producers of dyestuffs in the United States.

In 1946, Alliance took over one of the largest buildings in the group and started producing a limited line of fast color salts and bases. Since that time the line has been extended to a complete range. In addition, a large number of stabilized azoics in both solution and powder form are being produced by the company.

In 1950, the company made arrangements to secure additional property and proceeded to modernize and equip four more buildings. At the present time, bases and intermediates are manufactured in the original building. Another building houses equipment for the production of salts and stabilized azoics. Drying, grinding and blending machinery occupy another unit. Warehousing of the company's products is in an all-brick, air-cooled storage building. The fifth building in the group contains air-conditioned offices and research laboratory on the second floor while the machine shop and boiler room are located on the first floor.

Contracts for the construction of a new boiler house, lunch and locker room for the employees, and a new laboratory will be placed shortly, it is learned.

Harold W Coward, sec-treas in charge of production, was formerly associated with the National Aniline Div of Allied Dye & Chemical Co. According to Mr Coward, the Alliance Color and Chemical Co is the only American dyestuff producer to specialize in the manufacture of such a complete line of salts, bases and stabilized azoics. Mr Coward is also president of the Alliance Chemical Corp, which acts as sales agent for the company. Sales are made through a limited number of dyestuff distributors in all areas of the textile industry.

• Celanese Moving Application Laboratory to Summit, N J

The Application Laboratory of the Chemical Division of Celanese Corporation of America is being transferred from Newark to Summit, New Jersey, in a move designed to broaden the scope of its activities. David D Hecht, Director of the Laboratory, has held that position for five years.

The Application Laboratory, which operates as a function of the Product Development Department of the Chemical Division, assists in the development of new products through technical service and performs complete customer service for all Celanese chemicals.

It is pointed out that the expansion of facilities will permit intensification of work directed toward the application of the most recent Celanese development chemicals, namely, vinyl acetate, pentaerythritol, paraformaldehyde, vinyl plasticizers, lacquer solvents and TCP as a gasoline additive.

• Basic Chemical Group To Be Offered by ADM

A new group of basic chemicals will be made available to the chemical industry in 1954 according to Thomas L Daniels, president of Archer-Daniels-Midland Company. The new products which will consist of unsaturated higher alcohols will be produced at a new chemical plant located at Ashtabula, Ohio, 55 miles northeast of Cleveland on Lake Erie. Ground for the new plant was broken in June, 1953, and production of both saturated and unsaturated alcohols is expected next June.

According to Daniels many of the alcohols which will be made at the new plant are not commercially available today. Vegetable, animal and marine fats and oils will serve as the principal raw materials.

While the production of the new unsaturated higher alcohols will be a new venture for ADM, the company has been manufacturing fatty alcohols and glycerides since 1936. At the present time ADM is making cetyl, stearyl and liquid alcohols from sperm oil at its plant located at Wyandotte, Michigan.

Frank C Haas, vice president in charge of the ADM Chemical Products Division, which has its headquarters at Cleveland, will be in charge of the new operation. Haas pointed out that while the classical sodium reduction process will be used at Ashtabula, new techniques developed by ADM engineering and research groups are expected to afford several manufacturing shortcuts.

• Sill Appoints New England Representative

Sill Industries, Maplewood, N J, has announced the appointment of United States Supply Company, East Providence, R I, as its New England sales representative effective immediately.

United States Supply Company is handling sales in all six New England states and representing the new Sill gas-fired processing heaters as well as its electric radiant-heating panels.

The processing heaters are developments of the Carbomatic Corporation, which recently appointed Sill Industries as exclusive world-wide distributor. These units include the Carbomatic "Pyro-Jet" generator, a forced-air convection jet burner and the new Carbomatic "Una-Ray" radiant ceramic heater with the patented wire alloy protective screen.

Harold Whitaker, Victor Jones and Charles Burns are the principals of United States Supply Company.

• Rosewood Licensed To Apply Avcoset

Rosewood Fabric Corp has been licensed by American Viscose Corporation to convert rayon fabrics under the Avcoset program of quality control of washable fabrics.

Walter Ross, president of Rosewood, states that the corporation's immediate plans call for marketing under the Avcoset label two spring sports shirtings, Rose Mesh and Rose Fleck.

• Hooker Storage Facilities

Hooker Electrochemical Company announces the availability of 50% strength liquid caustic soda from new storage and distributing facilities located at Hudson Tank Storage, Weehawken, New Jersey. With storage capacity of over 1,000,000 gallons the new facilities offer shorter delivery time for tank car caustic in the New York-Northern New Jersey area, than by rail directly from Niagara Falls.

• New Koppers Sales Office

Establishment of a new sales office and appointment of a manager have been announced by C H Pottenger, Sales Manager of the Chemical Division of Koppers Company, Inc with headquarters in Pittsburgh, Pa.

Leo J Diamond is manager of the new Southern District Sales Office which began operations on August first in Room 1029 of the Healey Building in Atlanta (3), Georgia. Territories serviced from this office include Texas, Oklahoma, Arkansas, Mississippi, North and South Carolina, Tennessee, Florida, Alabama, Georgia and Louisiana.

• National Starch Awarded Additional Gov't Contract

The Office of the Quartermaster General has announced a research and development contract has been awarded to National Starch Products Inc of New York City, for the development of an improved adhesive for packaging of Quartermaster items for overseas shipment.

The new program calls for an adhesive to be developed which will seal closures on all presently known types of waterproof barrier materials, case-liners, fiberboards and coated papers. The sealed closures must be able to withstand the effects of exposure to a temperature of —60°F to 165°F, and a relative humidity range from 20 to 90%. Also within the scope of the new project will be studies to determine the effects of the various treated surfaces of barrier material and fiberboard on the bonding properties of adhesives.

According to National the research program for the Quartermaster General will be carried on in their Alexander Laboratories in Plainfield, N J and will continue for a period of approximately 18 months.

Recently the U S Navy awarded the Company a research and development contract to produce an improved adhesive for the loading of palletized unit loads, as well as to develop improved methods of adhesive applications.

• U S Testing Expands Canadian Representation

Effective immediately, W J Westaway Company, Ltd, Hamilton, Ontario, will take over Canadian representation for scientific research and testing services for United States Testing Company. Previously the firm had represented the testing firm in the sale of testing instruments and fugitive tints.

• FDC Begins Fall Term On Sept 16th

Fairleigh Dickinson College, Rutherford, N J, will begin its 1953-1954 textile courses on Wednesday, Sept 16th. The College offers a two-year day course in textiles leading to an Associate Arts degree and a four-year day course in Chemistry with Textile Option, leading to a BS. Applicants must be graduates of a recognized secondary school. Registration for the Fall term begins on Sept 9.

3-point evening courses in the following subjects will be offered this Fall: Raw Materials; Yarn and Cloth Manufacture; Identification, Analysis and Testing. 4-point evening courses will be offered in Textile Chemistry and Dyeing. A course in the Chemistry of Synthetic Dyes is also planned.

• TCCA Activities Increasing

The increasing and widely diversified activities of The Textile Color Card Association in serving the color needs of industry and the Government were reviewed briefly by Margaret Hayden Rorke, managing director, in a report read at the 38th annual meeting of the organization last month.

During the fiscal year of 1952, the Association gained 124 new members, 57 of whom are foreign. The Association issued 30,000 color cards in 1952, including advance and regular editions. A marked increase was reported in individual color consultation service given members and in the requests for special color samples from members and the Government, the number of swatches supplied exceeding by many thousands the amount of the previous year.

A new sphere of activity was the issuing by the Association of the Upholstery and Drapery Fabric Color Card in co-operation with the Decorative Fabrics Institute. This card and the Carpet and Rug Color Card, issued earlier in 1952, enjoy wide distribution throughout the home-furnishings and allied industries.

Citing the Association's close cooperation with the Government, Mrs Rorke announced that the Second Edition of the U S Army Card for the Official Colors for Arms and Services, as authorized by the Quartermaster General of the U S Army, was put in preparation in 1952 and will be issued this year. This new edition includes all the official service colors of the Departments of the Army and the Air Force. Embracing the new classifications of the different branches and agencies for both assigned and unassigned forces, the card is expected to be a valuable guide to all industries filling Government contracts which pertain to these colors. Also, during 1952, the Quartermaster Depot Research and Development Laboratories sought the Association's assistance in standardizing, in terms of T C C A colors, all the embroidery thread shades used by the Army and other Departments. This Depot has also requested the Association's help in issuing an official color card for standard Army buttons. Many color standards have likewise been established for the Departments of the Navy and Air Force.

Illustrating its varied activities, the Association, at the request of the Secretary of State of California, assisted in establishing the official standards for the Blue and Gold which have been in use as California's State colors for over 40 years. T C C A colors and numbers are specified for these two shades, together with scientific data pertaining to them, made possible by the Association's research activities with the National Bureau of Standards.

B M Jones

L B Hunt

• Jones & Hunt, Inc to Manufacture Fiberglas Plastics

Jones & Hunt, Inc, a newly organized firm, has taken over the plant and facilities of B M Jones Co, Gloucester, Mass, for the purpose of manufacturing Fiberglas Plastics for industrial uses. The new concern will also act as manufacturer's agent in the Northeast for allied lines of industrial machinery.

As previously noted, B M Jones, formerly general sales manager of Rodney Hunt Machine Co, has been named president and L B Hunt, formerly with Rodney Hunt and the Cherry-Burrell Corporation, vice president.

The new company's office and plant will remain at Emerson Ave, Gloucester, where a line of corrosion-resistant Fiberglas Plastic tanks, trucks and special molded products will be manufactured.

Jones & Hunt, Inc is currently representing in the Northeast the National Drying Machinery Company, with a full line of air-drying equipment for the textile and chemical industries and the Cherry-Burrell Corporation in the industrial field for homogenizing equipment, heat exchangers and Clayton steam generators. They also have facilities for special stainless steel fabrication.

• 41st National Safety Congress

Top management, supervision and the safety department will tell what they want in a safety program at the opening symposium of the textile sessions at the 41st National Safety Congress and Exposition to be held in Chicago, Oct 19-23.

Among the speakers at the symposium will be Raymond T Starr, vice-president of manufacturing, Columbian Rope Co and Stanley F Spence, director of safety and fire prevention, American Cyanamid Co.

Textile men attending the Tuesday afternoon session, Oct 20, will hear about ideas that stop accidents from Henry Johnson, safety engineer, Celanese Corp of America. He will be followed by George F Holt, who will show the relationship between accidents and fatigue resulting from poor foot care.

As in previous years the American Society of Safety Engineers will present morning sessions on topics of general interest. Subjects include nuclear energy, industrial lighting, electronic testing, safety training, research, human factors in safety, and others.

The 1953 exposition will feature a large, comprehensive display of accident prevention equipment.

• NCSC School of Textiles to Participate in TV Program

The School of Textiles, North Carolina State College, will participate in a 30-minute program to be presented over the CBS Television network sometime this fall.

The School of Textiles has been selected as one of 22 colleges and universities in the U S, each one of which will be the subject of one program in the CBS Sunday afternoon series to be entitled "The Search." Purpose of the series is to dramatize the contributions of higher education to individual and national welfare.

The program, to be produced on film, will describe the manufacture of yarns and fabrics and how the School carries out its training and research program in relation to the manufacturing processes. School personnel will participate in the program, which will have no professional actors.

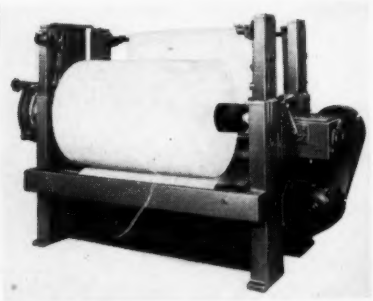
The network reportedly plans to spend about $25,000 to produce each program.

* * * *

Senior students at the School of Textiles, have the opportunity of applying for two new scholarships.

American Viscose Corporation has set up an award valued at $500 and Carbide and Carbon Chemicals Company, a Division of Union Carbide and Carbon Corporation, has established an annual stipend covering full tuition plus $200 in cash to the recipient.

NEW PRODUCTS AND DEVELOPMENTS



Van Vlaanderen Dyemaster Jig

• Dyemaster Jig Designed For All Fabrics

A new American jig, featuring relatively constant cloth speed and controlled constant tension, was recently introduced by Van Vlaanderen Machine Company, Paterson, New Jersey. The new unit, called the Dyemaster, is claimed to have greater versatility than any similar machine heretofore available. Cloth tension is controllable from virtual tensionlessness for sheers to full tension for ducks and similar materials.

The manufacturer points out that stopping, starting, reversing and number of passages of the fabric through the dyebath can be preset and automatically controlled for the greatest uniformity in dyeing. Thirty-four-inch batch rolls permit higher production from this jig than from similar European units, the company claims.

Other features of the machine include: tension-controlled loading and unloading by an exclusive mechanical arrangement; hydraulically damped oscillating expander arrangement; a new main drive gear box, designed and manufactured by Van Vlaanderen for this jig, using bevel gears mounted on antifriction bearings and running in oil for the highest efficiency. Also, it is claimed that the heavy box section side frames with cast iron girts contribute to exceptionally quiet and vibrationless operation of the Dyemaster. This jig is available with or without enclosure.

• All-Nylon Interlining

One of the nation's leading producers of garnetted materials, the Star Woolen Company, Cohoes, N Y, has introduced a permanent-crimped, all-nylon interlining for use in sportswear, snowsuits, lingerie, quilted garments, bedspreads and draperies, shoulder pads, etc.

Known as Ny-Sul-Lite, the new interlining is obtainable in a wide range of weights and sizes. It is said to provide excellent insulation and washability, quick drying, and greater warmth with less weight. Other features: mothproof, nonallergic, will not mat or creep, dry-cleanable, long staple fibers.

• Birch Bros Announces Three New Developments

Birch Brothers, Inc, Somerville, Mass, has announced three new developments of special interest to the textile finishing and dyeing trades.

1) Their new, high-speed butt-seam tacking range for the tacking of tricots, synthetics and worsted fabrics is said to eliminate the tendency of selvedges to turn where the chain stitch sewing ¼" from the selvedge is used.

2) Their high-speed ball-bearing counterbalanced chain stitch tacking head is reported to be capable of tacking at 60 ypm.

3) Patents have been applied for a stainless steel electrically controlled spreader and guider or conical opener for use on dye kettles for the dyeing of pile fabrics, tufted cotton carpets, and other fabrics to be dyed in the open width. This machine is also used ahead of squeeze rolls and other equipment.

• Air Guider Valve Contributes Greater Accuracy to Cloth Guiding

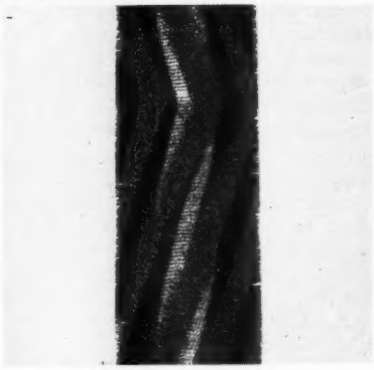
In the interests of more accurate guiding, the Superair cloth guider, manufactured by the Guider, Roll and Service Co, Daytona Beach, Fla, is now equipped with the Super Air Valve, a unit designed to reduce the time interval that the guider rolls are allowed to open.

The shorter time interval, which produces a reduction in the oscillation or side-to-side movement of the cloth, is made possible by placing the valve at the end of a 4-inch right-angle stem.

Another feature of the new valve is air economy. It is reported to be practically air tight, operating on an Oilite bearing 2" long.

In addition to equipping the new Superair guiders with the valve, the Florida concern has arranged to supply it for use on guiders currently in operation.

Superair cloth guider with Super Air Valve.



IBC Metal-Core Brush

• Spiral-Wound Metal-Core Brush

A new brush suited to cleaning and other applications where protection from solvents and other corrosive materials is desirable is in production by the Industrial Brush Company, Inc, Little Falls, N J.

The bristle, tufted, and set in continuous spiral herringbone pattern, is said to give the advantages of dense "fineset" brushing quality, without breaks in the brushing surface, such as occurs in tufted constructions.

Although the core is metal, it is not exposed to corrosive action, since the bristle is secured by nylon cords and sealed in place with moisture-acid and alkali-resisting plastic cement. No metal is exposed to get loose and cause damage.

• Four New Conco Specialties

Continental Chemical Co, 195 Twenty-first Ave, Paterson, N J, has introduced four new specialties to the trade:

Conco Finish 93—a soluble resin finish for all fibers, designed to give fullness and body (withal on the soft side) with superior nonslippage properties.

Conco Repellent SR—a durable water repellent in the form of an emulsion of polymerized silicone resins. This product is said to combine easily with urea-melamine- and other resins for wrinkle- and crease resistance. When used alone on acetates, it reportedly produces a full hand, better sewability and needle resistance.

Conco Dacrosist—a self-emulsified dye assistant and vehicle for dyeing Dacron or mixtures. It is said to give good wetting, dyeing and leveling.

Conco Nyscour V—a graphite and loom grease cleaner that is said to be practically solvent free. It is designed to give cleaner and whiter laces, nettings, veilings and woven fabrics.

• Low Cost Extender Clears

The newest development in the field of water-dilutable resin emulsions for textile printing was announced last month by Aula Chemicals, Inc, Elizabeth, N J, with the introduction of their 100 Series of Low-Cost Extender Clears.

Coming on the heels of the announcement of the Aulabrite 7000 Series of Color Concentrates, the 100 Series is expected to lower the cost of extender clears and lead to more extensive acceptance of the water-dilutable system. The manufacturer states that, when the new Aulabrite Extender Concentrates 791, 792 and 795 are formulated into ready-mixed extender clears of the new 100 Series, the result is low-cost printpastes with outstanding laundering and drycleaning resistance.

U S Patent 2,637,705, granted to Laszlo Auer, Aula president, describes extender printpastes based on three main components: water, solvents and cellulose ethers, such as methylcellulose. To secure laundering-resistant prints, it is necessary to add reinforcing resin emulsions as a fourth component to this extender clear, which represents a large percentage of the cost figure. The new development reportedly permits the use of a new line of Aulabrite extender concentrates at concentrations as low as ¼% and still yielding satisfactory results and fastness properties. This new development is said to give well-performing extender clear printpastes at less than 1¢ added cost to the methylcellulose, water and solvent in the formula.

• Permachem Process Said to Impart Germ-Killing Properties to Textiles

The Permachem Corporation of New York, N Y, according to its own and several independent laboratory tests, has developed a product and process which imparts disease-germ-killing properties to textiles of both natural and synthetic fibers, to a wider variety of bacteria, fungi and mildew organisms than penicillin does in the field of medicine, it is reported.

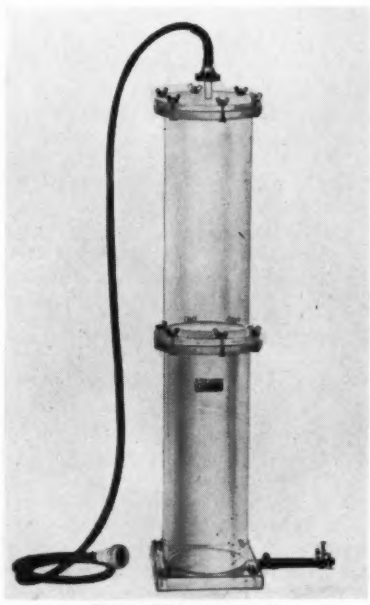
As far back as 1940, the Silver Producers Association, in collaboration with the U S Bureau of Standards predicted that if silver in a highly ionized state could be practically imparted to textiles and certain other materials, it would be highly lethal to a very wide variety of disease-producing bacteria, fungi, molds, etc.

Permachem is currently negotiating with leading manufacturers for pilot mill operation to establish large scale production methods to produce materials treated with the Permachem product.

• Maccoset 545 Dye Fixative

Mac Chemical Company, Knoxville, Tenn, has had enthusiastic response to Maccoset 545, an aftertreating agent designed to improve wash- and lightfastness of direct colors. The colorless liquid is a substantive cationic resin without any copper content.

Mac cites the following advantages to users of the product: it is easily dissolved, requires no additives or special equipment, makes direct dyes comparable in color fastness to vats at less cost, produces washfastness on developed color in one-sixth the time, makes goods fast to crocking, perspiration, hot or cold pressing, and leaves no offensive odor on the goods.



Enley "Chromo Pup".

• Chromo Pup Enhances Practical Chromatographic Separation

An adaptation of the Pup Reactor, a unit produced by Enley Products Inc, New York for the production of water of high ionic purity by ion exchange, and the investigation of ion exchange and ion exchange processes, is lending to the practicability of chromatographic separation on a commercial scale.

By fixing the base height and height of accessory units an unlimited fractionating column is created which, after treatment and development, may be dissembled at any given interval, and the concentrated medium isolated for additional treatment.

Each unit is custom made in diameters of 3.5 and 6". Prices start at $46.95.

Further information may be obtained by writing to the Company's "Pup" Reactor Division, 252 Pearl St, New York 38.

• Repelotex ST

Repelotex ST, a new, silicone-based water repellent, offers water repellency practically for the life of almost any fabric, at a cost equal to or lower than ordinary nonsiliconic treatments, according to an announcement by the manufacturer, Onyx Oil and Chemical Company, Jersey City, N J.

It is claimed that Repelotex ST defies dry cleaning and laundry soaps, improves the strength properties of resin-treated fabrics, imparts greater sewability and a better hand and is resistant to mark-off effects, spotting or staining.

Easy formulation and application, ready compatibility with resin finishes, no afterwash and lack of unpleasant odor either during finishing or after curing are added advantages claimed for the new repellent.

• Instantly Soluble Gums

A new process, which is said to render gums 100% effective in cold water, has been disclosed by the Soluble Products Co, 360 Furman Street, Brooklyn 1, N Y.

The process reportedly enables all water-soluble and water-dispersible gums to develop full viscosity on introduction to cold, aqueous media, without any special heating, aging or agitation. Clumping (from unreacted dry cores of gum) is completely eliminated, it is claimed, and uniformity from batch to batch is easily maintained.

"Aqualized" gums offered in powdered form by the Company include: tragacanth, karaya, locust bean, arabic and CMC.

Soluble Products suggests the following uses: sizing, water-proofing emulsions, finishing mixtures, thickening agent for printing, sizing medium for linen, hemp, wool and other fabrics, textile pastes, lithographic solutions, plate-coating solutions, laundry starch combinations, and also, to increase solubility of other sizing materials.

• ARCC Announces New Water-Repellent; Adhesive

A renewable water repellent, Arccopel W-18, and a new emulsion adhesive, Arcco 1294-31L have been introduced to the trade by American Resinous Chemicals Corporation, Peabody, Mass.

Arccopel W-18 is said to possess high emulsion stability, low dynamic absorption (even after wet mechanical action) and elimination of foaming while giving a high degree of water repellency to cotton, wool, rayon and synthetic fabrics. The product may be applied by standard techniques and reportedly possesses excellent storage stability. — Data Sheet E-117.

Arcco 1294-31L is said to impart strong heat-resistant bonds. Mild heat may be used to promote bond formation, but is not essential, according to the manufacturer.—Data Sheet A-44.

Workers in the steel industry are protected by clothing treated with Treesdale's Permaproof durable finish.

• "Permaproof 300"

A chemical treatment for clothing which will not burst into flame even when exposed to the intense heat of a blow-torch was demonstrated in New York last month by the Treesdale Laboratories and Textile Processing Company, Inc, Pittsburgh, Pa.

The demonstration at the Ambassador Hotel illustrated the flameproof compound "Permaproof 300", which when applied to cotton cloth provides a durable finish that is claimed to be impervious to combustion even at temperatures up to 4500°F. The "Permaproofed" cloth was described as the first finish of its kind which may be laundered repeatedly without losing its fire-retardant properties.

John A Beattie, president of Treesdale Laboratories, which developed the compound after nearly 20 years of research, explained that safety garments so flameproofed have been "road-tested" for the past five years at the Pittsburgh Works of the Jones & Laughlin Steel Corporation with "excellent results". They are now being used in other steel mills and industries where fire and intense heat are working factors, he said.

Mr Beattie declared the process was applicable to a variety of other uses in addition to safety clothing, including cotton bed ticking and mattress covers, some upholstery and drapery fabrics and "certain other items which annually run up huge fire losses" resulting from dropped cigarettes, lighted matches and similar careless or accidental causes.

The Permaproof compound is impregnated into the fiber of the cloth during the final finishing process. J F McCarthy, research director of Treesdale, explained that only standard finishing equipment is required. He added that the impregnant does not noticeably affect the porosity of the cloth and it adds toughness by increasing the tensile strength and abrasion resistance. It was reported that, in actual service, the treated cotton garments have been outwearing conventional wool and other untreated fibers by as much as five times. No cases of dermatitis have been reported either from handling the finish or from wearing the treated clothing.

Mr McCarthy displayed a special knee-length coat, which in addition to being flameproofed also has an aluminum-foil inner-liner that serves to reflect a great amount of heat away from the body. It was stated that some tests showed as high as 80 percent reflectivity values. As a result of this, steel workers are able to enter and remain up to three minutes in furnaces which have been "cooled" to 700-800°F.

The Pittsburgh firm has filled a number of Government orders for the flameproofing of tent liners and mattress tickings and is now expanding its facilities to treat a wide line of civilian goods, including mattress covers and certain upholstery and drapery fabrics.

A technical bulletin on the Permaproof 300 Series is available on request from the Company, which is located in the Benedum Trees Bldg, Pittsburgh 22.

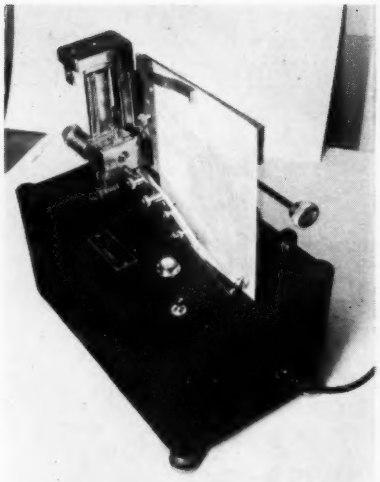
• Flat Bundle Fiber Tester

A new tester for tensile testing of cotton fibers in flat bundles, introduced recently by Scott Testers, Inc, Providence, R I, incorporates several innovations.

Known as the Clemson Flat Bundle Fibre Tester, the instrument was devised by Dean Hugh M Brown of Clemson Agricultural College. It is said to improve upon existing fiber test methods while incorporating the following advantages

1) Applies constant rate of load to sample.
2) Sample gauge length may be varied from 0 to 10 mm.
3) Motor driven, with control for either single tensile test or continuous hysteresis cycles.
4) Breaking load and elongation are recorded instantly without lag.
5) Produces a permanent record, reading directly in grams, useful for filing and reference.

The instrument makes use of the accustomed clamp equipment and sample techniques that are familiar to cotton mill technicians. On the Clemson instrument, the sample clamps are positioned in the *vertical* plane. The loading system is dead weight and at a constant rate of increase, actuated by a motor drive with simple operating controls, the load rate being 1,000 grams per second. The indication of the instantaneous load upon the sample is continuously drawn upon a form which is inserted in a suitable holder. Sample elongation and breaking load are also indicated by the graph, allowing the operator to determine the breaking load directly in grams. The test graph provides a permanent record. Provision is made for



Clemson Flat Bundle Fiber Tester

sliding the form to five successive positions in the holder, for inscribing up to five tests on the single chart.

The new machine brings to this specific test the ability to vary the gauge length. The sample clamps may be inserted with faces in conjunction for bundle tests at zero sample gauge length or they may be separated up to 10 mm apart for elongational testing upon that gauge length. A scale inscribed on the clamp holder indicates the amount of clamp separation and shows the sample gauge length without computation.

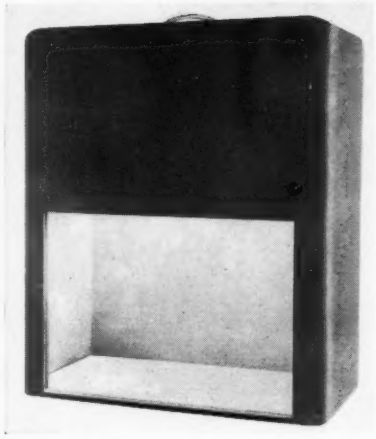
The machine can perform either single tensile tests, with mechanical stopping at the end of a single cycle, or hysteresis tests, the latter being accomplished by a twist of the control knob. Provision for reversal of the moving clamp at less than full load may be included.

The instrument is portable and requires a single electrical connection to 110-120V lighting circuit and a table space of 15" x 9".

• Durite GP-151

Durite GP-151, a new general purpose phenolic thermosetting compound in black or brown, has been announced by The Borden Company's Chemical Division. The compound is said to possess versatile molding characteristics as well as superior machining qualities, high surface luster and mechanical strength, while combining excellent drilling and tapping characteristics, a wide range of flows, and good buffing qualities. Borden's reports it is an extremely fast curing material with excellent appearance in all flow ranges.

Durite GP-151 sells for slightly more than 20 cents a pound. Further information may be obtained from the Durite Products Department, The Borden Company, Chemical Division, 5000 Summerdale Avenue, Philadelphia 24, Pa.



Macbeth Executive Desk Model Daylighting Lamp.

• Daylight Lamp for Color Control

A desk-top sized model of the Macbeth Color Matching Skylight, 21" in length, has been introduced by the Macbeth Daylighting Corp, Newburgh, N Y.

Known as the Macbeth Executive Daylight Lamp, the new model provides, over a limited area, the same simulated north sky daylight produced by the larger Macbeth Skylights. Artificial light (incandescent) is also available in the Executive for comparison purposes.

The unit is easily portable and runs on AC power. Dimensions: length 21", height 22", depth 11½".

• Hilton-Davis Introduces Lorothidol

A new antiseptic agent with a highly-effective deodorizing quality that is said to be capable of ridding 98 per cent of skin bacteria has been introduced by The Hilton-Davis Chemical Company, Cincinnati, O, a division of Sterling Drug Inc. It is currently being produced and marketed by Hilton-Davis, where large scale manufacturing methods have been developed for the new product.

Known as Lorothidol, and trade-marked under the brand of 2,2'-thiobis (4,6-dichlorphenol), the compound was developed by the Sterling-Winthrop Research Institute following three years of tests with chlorinated phenol agents. It is expected to be used in almost 300 different industrial products.

Preliminary studies reveal that Lorothidol may prove beneficial to the textile industry. It has been observed that the potent fungicidal action may prevent mildew by arresting the growth of molds and fungi in fabrics. In addition, it is said to eliminate the cause of perspiration odors in adult and children's clothing.

• Stymer LF Now in Substantial Use

Stymer LF, a durable size for solution-dyed filament acetate introduced by Monsanto Chemical Company's Merrimac Division last Spring, is going a long way in solving one of the biggest problems in the textile and dry-cleaning industries—the elimination of water-spotting on loom-finished taffetas.

The new product appears to be successfully meeting the operational requirements of many mills, which have conducted trials confirming the claims for its durability and spot-defeating properties. Dry-cleaners have also joined in, confirming the ability of Stymer LF to resist the "washing" action of water.

Stymer LF is a resin made soluble by ammonium hydroxide, which should be added in approximately 12 per cent of the new size. The addition of suitable lubricants or softeners is also recommended.

A successful formula used in one mill run included: 46 lb of Stymer LF, 5.5 lb of ammonium hydroxide 26° Baumé, and 5 lb of softener. The finished mix totaled 100 gallons.

Another mill reportedly was successful with 50 lb of Stymer LF, 6 lb of ammonium hydroxide 26° Bmé, and 7 lb of softener for a 100-gallon mix.

To mix, it is recommended: 1) draw 2/3 of water to be used; 2) heat 160°F, then add ammonium hydroxide; 3) start agitator and pour in Stymer LF; 4) cook for 30 minutes at 160°F; 5) dilute softener with hot water and add to mix, and 6) dilute to finished volume and store at temperature used in size box.

It is reported that some mills have found operations improved in some instances by increasing temperatures of the first two cans to as high as 210°F, and running the rest at normal temperature. They caution, however, that the temperatures of the cans must be raised sufficiently before the slasher is run above the slow speed. Speeds of 25-35 ypm and bare rubber rolls with a 20-60 durometer reading and 900-1200 lb quetch pressure have been reported.

* * * * *

Another Monsanto product, made available in commercial quantities earlier this year by the Organic Chemicals Division, is finding increasing application as a methylating agent in dyestuff manufacture.

The product (Methyl toluenesulfonate), a methyl ester of a high ortho-low para mixture of toluenesulfonic acid, is said to be more stable than methyl paratoluenesulfonate for which it is a replacement.

Atkomatic Solenoid Electric Valve.

• Aid to Plant Water Conservation

Atkomatic Solenoid Electric Valves are currently aiding manufacturing concerns in their efforts to reduce operating costs through water conservation within the plant. Because the major use of water is in the cooling of various machines, not only can such water be saved from constant flow when the machine is not in use, but it can also be recirculated in order to perform the cooling operation more effectively.

The solenoid electric valves used in conjunction with starting switches and thermostatic controls are said to control the water flow so effectively that it is used only when the temperatures build above a pre-determined level or when the machine is initially turned on. Meter tests reportedly show that, with the thermostatically-controlled valves, 60-70% of the water is saved, depending on the type of machine or the cooling operation performed.

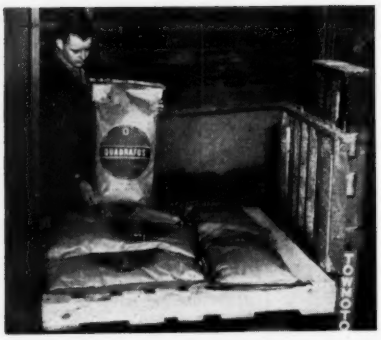
For further information, write to Atkomatic Valve Company, Dept 16, 545 Abbott Street, Indianapolis 25, Ind.

• Sodium Epoxystearate

Sodium Epoxystearate, an off-white powdered material containing a minimum of 90% of the sodium salt of 9,10-epoxystearic acid, is finding increasing application in the synthesis of products for the textile industry, such as finishing aids, water repellents, softeners and the like.

W C Hardesty Co, Inc, New York, announced the addition of the sodium salt to its line of products last Spring.

More stable than acid, Sodium Epoxystearate is more suitable for the preparation of derivatives. Its chief use is as a source of epoxystearic acid in making metal salts, esters, amides and other derivatives of 9,10 dihydroxy stearic acid.



Rumford Quadrafos (glassy polyphosphate) is now available in convenient 50-pound sacks. The new sacks, which supplement Rumford Chemical Works' standard 100-pound sacks, are polyethylene-lined, multi-walled, and of high wet-strength.

• Special Advantages of Heyden's "Superfyde"

Superfyde, a solid form of formaldehyde with less than .1% water content, is finding special application in processes which call for formaldehyde, but where the presence of water inhibits or prevents reaction. The new chemical is now being manufactured in commercial quantities by Heyden Chemical Corporation, New York, initial producers of formaldehyde in this country.

Somewhat similar to paraformaldehyde in chemical structure, Superfyde has both a higher molecular weight and higher melting point. It is of special interest as a source of dry formaldehyde in the manufacture of chemical intermediates and resins, and as a fumigant and fungicide, particularly in those uses where slow and controlled evolution of gaseous formaldehyde is important.

• UF Concentrate-85

Synthetic resin manufacturers will be able to increase production at reduced time in existing equipment at no increase in cost with a new, highly-concentrated material, UF Concentrate-85, according to an announcement made last month by the Nitrogen Division, Allied Chemical & Dye Corporation, New York.

The new raw material, composed of 61% formaldehyde and 24% urea in a water solution, is designed to enable manufacturers of urea-formaldehyde resins to charge to a kettle larger quantities of resin-forming ingredients since the water has been "squeezed" out. Batches are thus increased.

Process time is reduced by the shorter period required for dehydration, it is claimed, and shipping and handling costs are reduced as a result of having less water to handle. There is no increased cost to the user.

• Anthraquinone Process Under Study

The commercial feasibility of a process for the manufacture of anthraquinone from naphthoquinone and butadiene is now being studied in the pilot plant at the Calco Chemical Division, American Cyanamid Company, Bound Brook, N J.

Although the process under study at Calco has been known in the laboratory for some time, it had not been considered to be economic, largely because of the difficulty of producing naphthoquinone at a reasonable cost. Research, centered at the Bound Brook Laboratories in collaboration with other Cyanamid Laboratories, has resulted in improvements both in the process for the manufacture of naphthoquinone and its conversion to anthraquinone, a key intermediate in the synthesis of vat dyes.

Coleman Model 8 Photo-Electric Colorimeter.

• Coleman Model 8 Colorimeter

Coleman Instruments, Inc, 318 Madison St, Maywood, Ill, has introduced a completely new offering of its Model 8 Photo-Electric Colorimeter, with new power supply arrangements, revised combinations of accessory equipment and a lowered price schedule.

The Colorimeter is characterized by a group of unique features including:

1) The Coleman system of cuvettes and adapters for instant choice of any of 9 cuvette sizes, with minimum sample volumes ranging from 10 ml to 0.007 ml.
2) Interchangeable galvanometer scale panels allowing direct readings in terms of optical density, transmittance or constituent concentrations.
3) 4 ways to measure with dual measuring system. Both optical density and % transmittance readings may be taken by either of two methods—instant, direct-reflection readings from the illuminated galvanometer scale or null-point readings from the calibrated slide-wire potentiometer.

The new price schedule provides the instrument, complete with filters and cuvettes, ready for connection to a 6-volt storage battery, for $182.50. Voltage-regulated power supplies are also available for AC line operation.

The Coleman Model 8 Photo-Electric Colorimeter and its accessories are described in Bulletin B-214, available upon request.

• Robbins & Myers Manufacturing New Line of Chemical Plant Motors

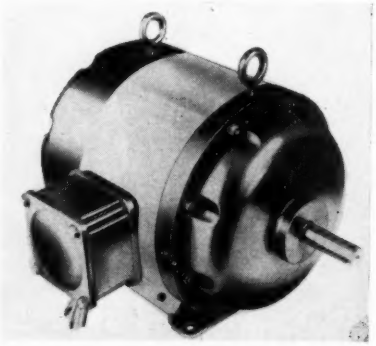
The Industrial Motor Division of Robbins & Myers, Inc, Springfield, Ohio, has started production of a new line of corrosion-proof chemical plant motors in ratings from one to 40 horsepower, in NEMA frames up to 405. The new motors will be available in totally-enclosed and Underwriters' Approved explosion-proof construction.

Special Class "A" chemical insulation treatments permit the use of the new motors in applications involving acids, alkalis, dyeing and bleaching, and peroxide.

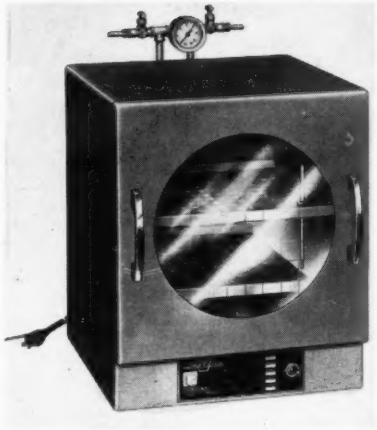
A wide variety of construction modifications is available, including a choice of cast bronze, cast aluminum, or cast iron ventilating fans. Cast bronze, cast iron, stainless steel, or flattened expanded metal ventilating grilles may also be specified. Automatic drain-and-breather plugs, as well as stainless steel shafts, can be supplied if desired at slight extra cost. All frames are constructed with stainless steel outer shells.

The terminal box on totally-enclosed models is gasketed and power leads are sealed at the shells with a nonhardening compound. Repellent grease at the shaft extension hub keeps moisture away from the bearings, which are prelubricated and sealed on both sides in double-row width.

Robbins & Myers also manufactures standard totally-enclosed and explosion-proof motors in ratings from one to 40 horsepower.



Robbins & Myers Chemical Plant Motor.



Labline Duo-Vac Oven.

• Dual Purpose Oven

A dual purpose oven that can be used for drying under vacuum or standard atmospheric conditions, at temperatures up to 125°C with 100% visibility of drying chamber and 228 sq in of shelf area is now being offered by Labline, Inc, 217-221 N Desplaines St, Chicago 6, Illinois.

Labline claims that the unit has the largest capacity of all vacuum ovens available, the vacuum chamber consisting of seamless drawn aluminum, 11" diameter by 12" deep with no seams. Among other features are an 11" diameter, heat-treated safety glass window with an 8 to 1 factor of safety; thermo-wall type of heat; 2" glass wool insulation all around the chamber, with asbestos ring separating chamber from outer housing; and a composition gasket with vacuum flap for easy and rapid vacuum seal.

The No. 3610 Labline Duo-Vac Oven sells for $240.00 with thermometer, two aluminum shelves, vacuum gauge and 2 valves, three-wire cord and plug, four Neoprene legs, pilot light; for 115 or 230V, 50-60 cycle, 750 watts. Height 18"; width 15"; depth 17".

• Moreland Chemical Developing New Series of Textile Compounds

The Manufacturing Division of the Moreland Chemical Company, Inc, Spartanburg, S C, has recently developed, and is offering for sale to the wet-processing industry, a series of new compounds, the first of which are Morofin R and Morolube BA.

Morofin R is a completely saturated fatty polyester, which is being supplied in the form of an easily dispersible white paste. A comprehensive data sheet, covering its properties and suggested uses, its application to woven and knitted fabrics, yarns and hosiery, and a method for preparing Morofin R solutions, is available on request.

Morolube BA, a nonionic polyester combined with a completely saturated, nonsaponifiable lubricant, has been designed to improve sewability and seam efficiency and to generally upgrade fabrics treated with it. It is supplied as a dispersible, almost liquid, opalescent cream. A comprehensive data sheet covers its properties and suggested uses, as well as its application to woolen, wool-synthetic, and cotton fabrics.

• Standardized Laboratory-on-Wheels

The Mobilab, reputedly the first complete testing laboratory-on-wheels ever sold "over the counter" by a scientific service house, was introduced to scientists and government officials in Washington recently, by Fisher Scientific Company, Pittsburgh, Pa.

Fisher development engineers have substantially reduced the high initial cost by designing a standardized laboratory body with all necessary services (gas, water and electricity; heat and air conditioning) to which laboratory furniture and testing apparatus are added to produce a field laboratory for any desired type of work. Sliding partitions can be used to divide the Mobilab into two or more sections.

The Mobilab will be shown at the American Chemical Society meetings in Chicago in September and at the Chemical Exposition in Philadelphia, Nov 30-Dec 5. Arrangements are also being made to have it available for inspection during the annaul meeting of A S T M in Atlantic City.

• Sonneborn Recommends Applications for Sonolene 500

The Textile Chemicals Division of L Sonneborn Sons, Inc, New York, has recommended the following textile applications for Sonolene 500, a new synthetic detergent recently placed on the market: boil-off, scouring and dyeing of cotton, rayon, acetate, nylon and wool; preparation of goods for dyeing; kier boiling; print washing; after-soaping of naphthols and package dyeing.

Reportedly salt-free and 100% rinseable, the product, a high molecular weight alkyl aryl sulfonate, in gel form, is said to possess good wetting and outstanding detergent and emulsifying properties. A 1% solution of Sonolene 500 has a pH of 7.4, and the product itself is said to be stable throughout the entire pH range.

The manufacturer reports that Sonolene 500 has excellent foaming and rewetting properties, and that fabrics and yarns processed with it will always retain their natural soft hand and finish.

ARC Standard Unit Rectifier.

• Standard Unit Rectifiers Available

American Rectifier Corporation, 95 Lafayette St, New York, N Y, is now delivering a standard unit rectifier "capable of producing anything a motor generator set can" with no warm-up period required, according to a recent announcement.

Designed to convert AC to DC, the new units range from 3 to 50 KW, 125 or 230 volts DC, output and either fixed or variable voltage, DC units to accommodate any AC voltage or frequency input. Also available are standard input voltages at 60 cycles. All American Rectifiers are tested with a 200% overload.

A brochure on the application of American rectifiers is available on request.

• Aid to Dyeing of Bright Shades on Feathers, Leathers, Pure Silks

The dyeing of bright shades on feathers, leathers and pure silks has been improved considerably in several plants, according to Dexter Chemical Corp, New York, when their Barisol BRM is used as a dispersing agent, dye assistant and wetting agent in the dyebath.

In the use of a basic dye, such as malachite green, it is claimed that the normal bluish cast is eliminated and the shade made brighter when 4 quarts of Barisol BRM and 5 quarts of acetic acid are added to 100 gallons of dyebath. This reportedly holds true in the application of other basic dyes.

The emulsifying properties of Barisol BRM are said to clear up the bath and prevent scum from redepositing on the interstices of the fabric.

• Low-temperature Curing Resin for Synthetics

The development of Finish EN, a new low-temperature curing resin for synthetic blends and fabrics, has been announced by Sandoz Chemical Works, Inc, 67 Van Dam St, New York, N Y.

This new water-soluble urea-formaldehyde resin is said to produce good crease resistance, dimensional stability, good abrasion resistance and a desirable hand at curing temperatures as low as 240° to 260° F. It is claimed that the low-temperature curing made possible with Finish EN prevents the yellowing or roughening that often occurs at higher temperatures when working with Orlon, Dacron, dynel, Vicara, Acrilan and other new synthetic fibers separately or blended with viscose rayon.

Another advantage of Finish EN, according to the manufacturer, is its homogeneous consistency, which contributes to improved resin retention by the fabric.

In combination with Cuprofix, the new finish is said to be most suitable for obtaining dimensional stability and color fastness at low cost on synthetics.

A booklet on Finish EN is available from Sandoz on request.

• Two Additions to Irgalan Series

Geigy Company, Inc, New York, has announced the addition of a new yellow and the first blue red to their Irgalan series of dyestuffs.

Irgalan Yellow 2RL is said to possess similar characteristics to the previously introduced Irgalans, including excellent fastness to light and wet finishing. It is recommended by the manufacturer for the dyeing of wool at all stages of manufacture including yarn, piece goods, stock and slubbing where outstanding fastness is a prime requisite; application to filament or spun nylon with high fastness standards; dyeing wool or nylon in blends containing cotton or rayon; application in weakly acidified or neutral dyebaths for the production of fashion shades on piece goods in combination with Irgalan Brown 2RL, Irgalan Grey BL and Irgalan Orange RL.

Irgalan Bordeaux 2BL is reported to be characterized by excellent resistance to light, milling, washing, perspiration and sea water; excellent penetration, level dyeing and almost complete exhaustion from neutral dyebaths; shorter dyeing time as compared with wool dyestuffs, resulting in superior quality of wool; compatible in dyeing properties with other members of the Irgalan series for the dyeing of wool or nylon with no blocking effects; minor shade change in artificial light.

Bulletins 48-G (covering Irgalan Yellow 2RL) and 49-G (covering Irgalan Bordeaux 2BL) are available on request.

Palletized load of bagged chemicals being picked up from storage for delivery to the Dyeing Department at the Hanes Dye and Finishing Company plant in Winston-Salem. Note double tiers of palletized-bagged chemicals.

• Fork Truck Triples Storage Space of N C Firm

One 2000 lb-capacity, fork-lift truck used in combination with standard size, slat-type, double-faced pallets, reportedly has tripled the storage space and sharply reduced the handling time for bagged chemicals and fabric bales at the Hanes Dye and Finishing Company plant in Winston-Salem, North Carolina. The trucks are manufactured by Clark Equipment Company, Buchanan, Battle Creek and Jackson, Michigan.

With the present system 50-pound bags are palletized as received, and the fork-lift truck takes them to storage and tiers them two loads high. The fork truck is said to supply the Dyeing Department with 200 bags in 20 minutes, with a saving of 4 man-hours on the operation.

Similarly, bales of grey goods are handled two and three on a pallet and the pallets are tiered in storage, the entire job being handled by the truck operator and a helper. It is claimed that up to three times the number of bales can be stored in a given area as was previously the case and the saving in time amounts to approximately three man-hours for every hour the truck works.

• Meta-Phenols 220 Available

Meta-Phenols 220, the newest product of coal hydrogenation, is now available in tank-car quantities. This product is a mixture of reactive cresols, xylenols, and ethyl phenols with a boiling range of 207 to 230°C. Total phenolic material is about 98 per cent of the mixture by weight, with a high proportion of *meta* substitution. An average of approximately 2.2 *ortho* and *para* positions per molecule are open.

Judging by its general reactivity, it is expected that Meta-Phenols 220 will be useful as an intermediate for all types of phenolic resins, particularly surface coatings with chemical, alkali, and soap resistance. It can also be used in phenolic dyestuffs manufacture and in syntheses involving ring substitution on a phenol.

It is reported that nonionic surface-active agents and organic and inorganic esters can be made from Meta-Phenols 220, since the hydroxyl groups react normally.

Technical information and samples are available from Carbide and Carbon Chemicals Company, 30 East 42nd Street, New York 17, N Y.

• New Grade of o-Phenylphenol Available

A new grade of o-phenylphenol in the form of white flakes and essentially colorless and odorless is now available for use in the industrial preservative field, according to an announcement by The Dow Chemical Company, Midland, Mich. The technical grade of o-phenylphenol has been used for several years as a preservative for textile sizings and other applications where a product of low toxicity and low health hazards is required.

The new product, called o-Phenylphenol, Purified, is the result of research carried on by Dow scientists, who in addition to reducing taste and odor characteristics of the technical grade, have developed a crystalline flake that is said to retain its whiteness.

A bulletin about the new product is available from The Dowicide Sales Division of the Company.

• Du Pont Introduces "Textured Yarn" Process

A new process which will permit endless variation in both knitted and woven fabrics has been announced by the Du Pont Company's Textile Fibers Department.

The process reportedly accomplishes a physical modification of any textile yarn, adding bulk, texture, covering power, dryness of hand and other effects depending on process variations and the choice of the basic yarn.

Although Du Pont has applied for patents covering the product used in the process as well as the method itself — known as the "textured yarn process" — the Company plans to make the process available to the trade under a licensing arrangement at a later date.

NAMES IN THE NEWS

THE Society of Dyers and Colourists has announced that JOHN GARNETT HOPKINSON has accepted the invitation of the Council of the Society to serve as Honorary Secretary in succession to JOHN BARRITT, who has resigned to become assistant director of research at the Wool Industries Research Association. Mr Barritt will continue to act as chairman of the editorial panel and as a Part I Editor of the Second Edition of the *Colour Index;* also, he has accepted the office of chairman of the Society's Publications Committee.

Mr Hopkinson is a former vice-president of the Society and one time Honorary Secretary.

NELSON S KNAGGS, vice-president in charge of sales, The Hilton-Davis Chemical Company, left August 11 for Mexico's Isthmus of Tehuantepec to explore ruins of the Olmec civilization, one of the oldest in the western hemisphere.

A veteran of five previous expeditions, Mr Knaggs is carrying the flag of The Explorer's Club, of which he is a member, in an attempt to assemble additional data concerning the Olmec culture, which existed about the time of Christ. Very little is still known of the way of life of the Olmecs, who far antedate the Incas and Aztecs and are believed to have been contemporaries of the Mayas. Present knowledge was obtained largely from two expeditions to the area sponsored by the Smithsonian Institution and the National Geographic Society.

Mr Knaggs plans to spend one month on the exploration. He is being accompanied by his 16-year-old son, David, and by Indian guides.

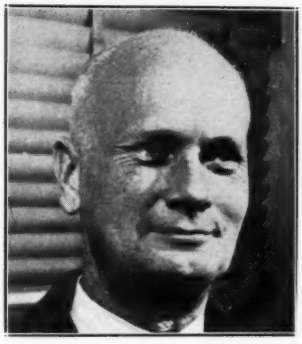
RICHARD S COX, Dean of the Philadelphia Textile Institute, celebrated his 75th birthday on Monday, August 3rd.

Dr Cox, known as "Dick" to over 4,000 PTI alumni, will begin his 54th year at the college in September.

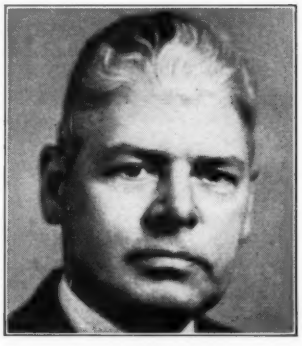
A graduate of Central High School in 1896, Dr Cox graduated from the School of Industrial Art in 1899, and finished special courses in the Textile Institute that same year.

In 1900, Dr Cox organized the Jacquard and Color Department at the textile school which he headed for 45 years. Today he is considered one of the foremost authorities on jacquard weaving in the country.

From 1922 to 1943, Dr Cox was assistant dean and director of Evening School, and in 1943, he was appointed Dean of the Day School.



J H Hilldring



C T White

GENERAL Aniline & Film Corporation has announced the election of JOHN H HILLDRING as senior vice-president and the appointment of CHANDLER T WHITE as manager of operations of the Rensselaer, N Y plant of General Aniline Works Division.

Mr Hilldring first became associated with General Aniline as a consultant on foreign trade in 1947, and in 1950 he became general manager of foreign operations for both General Aniline and General Dyestuff Corporation, the sales outlet for GAF dyes and chemicals.

As Senior Vice President, he assumes new duties at the home office, assisting the president in the direction of the company's operations. In addition to his current responsibilities for foreign operations, he will have these GAF executives reporting to him: the vice presidents of operations for the Ansco, Ozalid and General Aniline Works (dyestuffs and chemicals) Divisions; the directors of personnel relations, patents and industrial development; company counsel and the general manager of foreign operations.

Mr White, a GAF vice-president, will represent the Company wholly in community, public and state relations as part of his responsibilities for Corporation investments in the Rensselaer-Albany area.

WILLIAN J ERWIN began service with Dan River Mills as president and treasurer on August 24, following his resignation as vice-president, general manager and director of the Riegel Textile Corporation at Ware Shoals, S C.

Prior to his association with Riegel, Mr Erwin was vice-president of J P Stevens & Company, from 1946 to 1949, and vice-president and director of the Republic Cotton Mills, from 1934 to 1946.

FOOD Machinery and Chemical Corporation has announced the appointment of ALFRED T LOEFFLER as assistant vice-president of its Chemical Divisions. Mr Loeffler becomes administrative assistant to ERNEST HART, executive vice president of Chemical Divisions with headquarters in the Chemical Divisions Administrative Offices at New York.

Mr Loeffler was for a number of years associated with the Hooker Electrochemical Company, following which he joined Monsanto Chemical Company, becoming General Branch Manager in New York. In 1951 he became Chief of the Chemical Branch of the Office of Price Stabilization in Washington. Returning to Monsanto, he was appointed Director of Development of the Organic Chemicals Division at St Louis.

THE retirement of FRED W FRALEY on July 1st as vice president has been announced by Diamond Alkali Company. He resigned recently as a director of the Company.

Mr Fraley's 25-year career with Diamond began in 1928 as manager of Diamond's Southwest Sales Office in Houston, Texas. In 1943 he became vice president-sales, and has served as a Director since 1947. He was also a Director and former Vice President of The Chlorine Institute.

Always active in the chemical industry's relationship with the government, Mr Fraley recently served with the National Production Authority under the "loan" plan whereby industry executives are recruited for temporary periods. At the time he concluded his nine months of service in December of 1952, Mr Fraley was Assistant Administrator of NPA in charge of the Chemical, Rubber & Forest Products Bureau. During World War II, he was a member of the WPB and Munitions Board industry advisory committees.

R P Anthony

R P ANTHONY has joined the staff of Seydel-Woolley & Co as a technical sales representative of the Finishing Chemicals Division. He has had six years experience in finishing at the Cramerton Division of Burlington Mills, where he held positions as head chemist, and later, supervisor of bleaching and finishing.

JOHN M HUGHLETT, vice-president of J P Stevens & Co, and NEWTON J RICE, president of Wear-Right Gloves, Inc, were elected new directors of the Textile Color Card Association at the 38th annual meeting held July 17th at the organization's headquarters, 200 Madison Avenue, New York.

The following were re-elected to the Association's Board of Directors for the year 1953-54:

JAMES DIEPHUIS—Vice-President, Pacific Mills

W J FULLERTON—Merchandising Manager, Dan River Mills, Inc

HENRY A HAFNER—President, Hafner Associates, Inc

W RALPH MacINTYRE — President, Joseph Bancroft & Sons Co

ROBERT A RAMSDELL—E I du Pont de Nemours & Co, Inc

ARMAND SCHWAB—President, Armand Schwab & Co, Inc

ROY E TILLES, SR—President, Gotham Hosiery Co, Inc

HENRY C VAN BREDERODE — Vice-President, Celanese Corp of America

JOHN F WARNER—Vice-President, D B Fuller & Co, Inc

CHARLES F H JOHNSON, JR, formerly president of Botany Mills, Inc, retired from the Association's Board after serving as a director for seven years.

At a meeting of the Board of Directors, held immediately after the annual meeting, all officers of the Association were re-elected, as follows:

President: ROY E TILLES, SR
1st Vice-Pres: ARMAND SCHWAB
2nd Vice-Pres: JOHN F WARNER
Treasurer: HENRY C VAN BREDERODE
Secretary and Managing Director: MARGARET HAYDEN RORKE

HARRY G SMOLENS has joined the Technical Service Department of the Pennsylvania Salt Manufacturing Company as customer consultant on bleaching, especially hydrogen peroxide. Long associated with hydrogen peroxide and its use in bleaching and allied applications, Mr Smolens has participated in the development of many of the modern textile peroxide bleaching procedures. Before joining Pennsalt he was, for more than 25 years, consulting engineer for the Buffalo Electro-Chemical Co, Inc.

EDWARD B SIMPSON has joined the staff of the Emkay Chemical Company, Elizabeth, N J, as technician and sales representative.

Mr Simpson has held supervisory positions with the following firms: Millville Mfg Co, Utica Willowvale Bleachery, Bradford Dyeing Association, Aspinook Corporation, Danvers Bleachery, and Dan River Mills. He has also spent 10 years as a chemical salesman in the Carolinas, Georgia, Virginia and Tennessee.

CHARLES A HIGGINS recently resigned as chairman of the board of Hercules Powder Company, a post he has held since 1944. He also resigned as a member of the company's finance committee, but remained a member of the Hercules' board of directors.

ANSON B NIXON, a vice president of the chemical company since 1940, was elected by members of the board at a regular monthly meeting to succeed Mr Higgins as chairman of the board. He resigned as a company vice president to accept the post.

At the same time, ALBERT E FORSTER, president of Hercules, was elected a member of the company's finance committee, to fill the vacancy left by Mr Higgins' resignation.

Mr Forster was elected president of the company at a board meeting April 29, when Mr Higgins resigned the post he had held since 1939 in keeping with the Hercules' retirement policy.

Mr Nixon, who has served as vice chairman of the board of directors since last year, has served as general manager of both the Hercules' Cellulose Products Department and the Naval Stores Department. He became a member of the board of directors in 1932.

JULIUS FLEISCHMANN of Cincinnati, Ohio, has been elected a director of Gallowhur Chemical Corporation, New York manufacturers of agricultural and industrial chemicals.

C W Mitchell

C W MITCHELL has been named executive vice president of Nyotex Chemical Company, Houston, Texas, manufacturers of aluminum chloride, hydrofluoric acid and lime. It is a mutually owned subsidiary of Consolidated Chemical Industries Inc, Stauffer Chemical Company, and Harshaw Chemical Company.

Mr Mitchell, a vice president of Nyotex prior to his latest appointment, spent 17 years with the Missouri Pacific Railroad and has been with Consolidated Chemical for 24 years.

JOHN C CLAY, Assistant Administrator, National Production Authority, has completed his duties with the agency and is returning to private industry. However, Mr Clay will continue to serve as Consultant to H B McCOY, Acting NPA Administrator.

Mr Clay's duties with NPA included responsibility for mobilization planning, all priorities, certificates of amortization and other activities of five Divisions. He has been on leave for 14 months as assistant to the executive vice president of National Starch Products Inc, New York.

THE first Bersworth Fellowship in Chelate Chemistry has been awarded to DARYLE H BUSCH, a graduate chemistry major at the University of Illinois. The Fellowship carries a stipend of $3500 and will provide Mr Busch with one year of graduate study and research on the metal chelates at the University of Illinois.

ROSS M HASTIE is now a divisional vice president of The Hilton-Davis Chemical Company, a Division of Sterling Drug Inc, Cincinnati.

He joined the Ohio firm in 1936 as an engineer and in 1946 was appointed director of purchasing. In addition, Mr Hastie assisted in supervising sales of Hilton-Davis' organic intermediates to pigment and dyestuff manufacturers.

C E Ford

C E FORD has assumed new duties as manager, Chemical Carbon Sales Department, National Carbon Company, a Division of Union Carbide and Carbon Corporation. He has been with National Carbon since 1937.

Among Mr Ford's newly assigned activities will be the sale of graphite anodes used in the chlorine-alkali industries and carbon and graphite equipment for the chemical and process industries.

RUSSELL L MILLER has succeeded JAMES A WILSON as production manager of Monsanto Chemical Company's Merrimac Division, Everett, Mass. He has been Everett plant manager since March, 1948.

The announcement, made by Charles H Sommer, Division general manager, on July 16th, follows one by H J Heffernan, general sales manager, naming several branch sales managers and calling attention to a revision of the Division's sales territories.

PHILIP L. SLAYTON was named branch manager of the Chicago territory, including the Dakotas, Minnesota, Wisconsin, Iowa, Michigan and parts of Illinois and Indiana. LLOYD D SHAND becomes branch manager for the Ohio territory, including counties in Pennsylvania and West Virginia. DUANE M FEELEY, technical representative in St Louis, was appointed branch manager for that area and for the Texas territory. The St Louis territory includes Missouri, Arkansas, Wyoming, Colorado, Nebraska, Kansas, Oklahoma, and sections of Indiana and Illinois. To the Charlotte, N C, office, under the direction of ROY T COWING, present branch manager, have been assigned the states of Virginia, Tennessee, Mississippi, Louisiana, Alabama, Georgia, North Carolina, South Carolina, Florida, and sections of West Virginia and Maryland. The New York district, under THOMAS F GOGAN, present sales manager, covers New York, New Jersey, Delaware, the District of Columbia, and parts of Connecticut, Pennsylvania and Maryland.

P Wengraf

PAUL WENGRAF, who has conducted the "Patent Digest" in the REPORTER since July 1, 1946, has been accepted as a Professional Engineer for the State of New York.

Dr Wengraf was graduated from the University of Vienna as a Doctor of Chemistry and Philosophy, following which he spent approximately 10 years as a colorist in various textile printing mills in Austria and Czechoslovakia. He later joined the Austrian patent Office as an examiner in the field of textile processing, and from there went with Sandoz as a textile printing expert. Before coming to the U S, he edited, first in Vienna and later in Berne, reports dealing with new chemical processes and apparatus in the textile industry.

Since arriving in the U S, he has published a similar compendium in conjunction with the patent attorneys, Richards & Geier. In 1941 he joined the Hart Products Corp, and in 1942 he became research chemist with the Arkansas Company.

Among his latest work is a translation and revision, in conjunction with Herman P Baumann, of two volumes of Diserens' "Technology of Dyeing and Printing."

HAROLD E WOODWARD, one of the nation's foremost azo dye experts, has retired after more than 35 years as a research chemist at Du Pont's Jackson Laboratory, Deepwater Point, N J.

During that time, Dr Woodward has worked outside the field of azo chemistry for only a few months. A few of the dyes he developed and which are currently being manufactured are: Du Pont Neutral Brown 2RS, Pontamine Fast Blue 2GL, Pontamine Diazo Violet RR, Pontamine Diazo Violet BL, and Pontamine Diazo Green BL. He also had a major role in the development of Du Pont's current line of Luxol spirit-soluble colors. His most striking accomplishments have been in the field of pigments.

Along with W W Bauer, Dr Woodward is the corecipient of the first patent on azo dyes granted by Du Pont. Altogether, his name appears on 26 U S patents.

M S Lachner

MARSHALL S LACHNER has been appointed manager of the Soap and Industrial Sales Departments of Colgate-Palmolive-Peet Company. As department head, Mr Lachner succeeds JAMES A REILLY, who died on July 24.

Mr Lachner joined the company in 1938 as a displayman and served successively as retail salesman, district supervisor, divisional supervisor and district manager in the Jersey City and Chicago Districts. In 1949 he was named divisional manager of the Berkeley (California) Division, a position he held until 1951 when he joined the home office organization in Jersey City as assistant to Mr Reilly.

CECIL A POTTER, president of the Machinery and Engineering Corporation of Westminster, Massachusetts, was appointed general manager of B F Perkins & Son, Inc, of Holyoke, Massachusetts on August 1.

Mr Potter was general manager and chief engineer of the Duesberg-Bosson of America, Inc of Fitchburg, Mass for eight years. Previously, he had been chief engineer of B F Perkins & Son, Inc, for more than seventeen years.

E R HERRICK, plant manager of Heyden Chemical Corporation's Fords, New Jersey, plant since 1940 and associated with Heyden for 30 years has retired. He will continue with Heyden as a consultant.

ARTHUR W WILLIS, formerly assistant plant manager of Heyden's Princeton, New Jersey, plant, succeeds Mr Herrick, as manager of the Fords plant. Mr Willis has been associated with Heyden since 1942.

HOWARD R BATCHELDER has joined the staff of Battelle Institute, Columbus, Ohio, as an associate consulting chemist.

In his new position, Mr Batchelder will coordinate research devoted to nonfuel uses of coal and chemicals derived from coal.

C K Batson

A E Brown

L W Rainard

R V Carlson

A M Sookne

E S Lamont

CROWN CHEMICAL CORPORATION, Providence, R I, has appointed C K BATSON as Southern sales and technical representative, and RALPH V CARLSON, JR as Southern New England sales representative.

Mr Batson, from his headquarters in Greenville, S C, will cover South Carolina, Georgia, Alabama and Tennessee. He comes to Crown from the Augusta Chemical Company and has been connected with the dyeing and finishing industry for the past 18 years.

Mr Carlson from his headquarters in Providence, will cover Rhode Island, Connecticut and parts of Massachuetts.

APPOINTMENT of an assistant to the executive vice president, and two promotions within the engineering department of Solvay Process Division, Allied Chemical & Dye Corporation became effective August 1.

I H MUNRO, who has been chief engineer nearly two years, takes over the post of assistant to CARLTON BATES, Solvay's executive vice president. Mr Munro will be located at the company's New York office.

As a result of Mr Munro's new assignment, RAYMOND LARGENT has been named chief engineer, with WILLIAM E DUGAN, JR being appointed assistant chief engineer.

In their new posts, both Mr Largent and Mr Dugan will be located at the company's Syracuse, N Y, office.

L R Mizell

HARRIS RESEARCH LABORATORIES, Washington, D C, has announced the appointment of ALFRED E BROWN as vice president and assistant director of research, ARNOLD M SOOKNE as assistant director of research, and LOUIS R MIZELL as laboratory manager.

Recent additions to the staff of the Laboratories include HUMPHREY J ELLIOTT, JR, MARILYN V GASS, DONALD L HOLFORD, HARRY G LENTO, EILEEN F NATHAN and DIMITRI J STANCIOFF.

ARTHUR O WELLMAN, president of Nichols & Company, Inc, Boston, Massachusetts was elected to the United States Testing Company's Board of Directors at a meeting held July 1.

LEO W RAINARD and EDMUND S LAMONT, both of whom were associated with Alexander Smith, Inc, have joined the "Everglaze" Service Department of Joseph Bancroft & Sons Company, Wilmington, Del.

Mr Rainard, who was formerly director of research for Alexander Smith, was involved in the research, development and extension of the Textralizing process while affiliated with the Yonkers concern, and, according to the latest announcement, he will continue those activities with Bancroft. Under the direction of ARNOLD L LIPPERT, Bancroft vice president in charge of research and development, he will help develop and execute Bancroft's licensing programs for the process, recently acquired from Alexander Smith.

Mr Lamont will also be concerned with the development of the Textralizing process at Bancroft.

WILLIAM S CRAWLEY succeeds the late JOHN S CHAYA as head of the yarn processing and weaving division of American Viscose Corporation's Textile Research Department.

Mr Crawley joined American Viscose Corporation in 1946 as a textile engineer on the staff of HOWARD E SHEARER, head of the industrial division of the Textile Research Department. He was transferred to the weaving division in 1950 as an assistant to Mr Chaya.

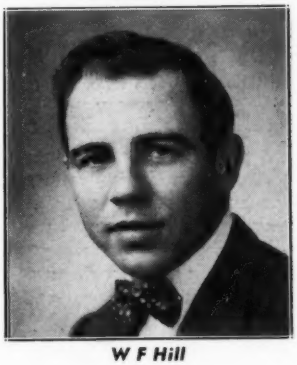
C MacKenzie

H J Bonino

J M Privette

R P Wood

E J Clark



W F Hill

CALCO Chemical Division, American Cyanamid Company has named CAMERON MacKENZIE as branch manager, Dyestuff Department, of the Boston District Office and ROBERT P WOOD as branch manager of the Providence District office. These moves follow the recent move of Calco's Boston office to modern permanent quarters at 1055 Commonwealth Avenue.

Elsewhere in the Cyanamid organization, VERNER ALEXANDERSON has been appointed to the Market Research Group of the New Product Development Department, where, as Senior Market Analyst, he will be concerned with market research and long range planning.

At Cyanamid's new nitrogen chemicals plant under construction near New Orleans, J J FITZGERALD has been named assistant to the plant manager, R T LUKAT is the new Ammonia Department superintendent, and H E GRAULICH has been appointed production supervisor.

JOHN C HAAS, a director of Rohm & Haas Company since 1948, has been elected a vice president and member of the Executive Committee.

Mr Haas joined the Company in 1942 as a development engineer. Since 1949 he has served successively as plant manager at the Knoxville, Tenn, and Houston, Texas plants. He has now been transferred to the Company's main office in Philadelphia.

I Peters

HUGH J BONINO, Vice President and Secretary of Metro-Atlantic, Inc, who recently took over as director of sales in the Middle Atlantic area, has announced that EVERETT J CLARK and I PETERS are now members of his firm's sales staff.

Mr Clark has an extensive background of experience in the supervision of textile printing operations. His most recent connection was in the capacity of supervisor of dyeing at the Riverdale Dye Works.

Mr Peters has been associated with the textile processing industry since 1939.

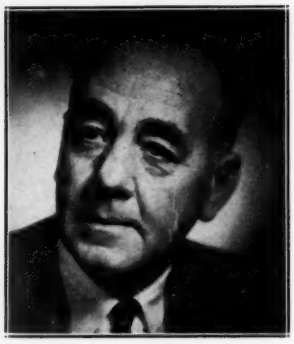
Both men will operate from Metro's New York offices at 55 West 42nd Street. Mr Peters will cover parts of the metropolitan area and northern New York State and Pennsylvania, while Mr Clark will cover parts of the metropolitan area, southern Pennsylvania, Maryland, Delaware and Virginia.

JOHN M PRIVETTE and WILLIAM F HILL have been named to the Quality Control Department and Research Laboratory of the Ohio Falls, Inc, Louisville, Ky. Both men will be under the direction of WILLIAM P WELCH, director of research, and RUDOLPH H JOHNSON.

ARTHUR L SNYDER has been appointed sales manager of the Textile Fibers Department of Carbide and Carbon Chemicals Company, a Division of Union Carbide and Carbon Corporation. Mr Snyder, who had been assistant sales manager, succeeds CARL A SETTERSTROM, who was recently appointed general manager of the Department.

THE election of I MELVILLE STEIN as president of Leeds & Northrup Company, Philadelphia manufacturers of electrical measuring instruments, automatic controls and heat-treating furnaces, was announced on July 27th by the board of directors. Mr Stein, formerly executive vice president, succeeds CHARLES S REDDING who, after 14 years as L & N president, becomes chairman of the board, a post that has been vacant since the death of Morris Leeds in 1952.

D H SCHULTZ, who has been secretary and treasurer since 1940, succeeds Mr Stein as executive vice-president while retaining his duties as treasurer. GEORGE W TALL, JR, vice president, assumes the additional post of secretary.



H A DeWolf

Henry A DeWolf is the founder of American Chemical and Solvents Co of Providence, R I, recently named New England sales representative for Refined Products Corp, Lyndhurst, N J.

P J UNDERWOOD has been appointed the new executive secretary of the Society of Plastics Engineers, Inc. Prior to his present appointment he was in organizational and public relations work, serving as field representative and executive assistant in trade associations in Washington.

HOOKER Electrochemical Company has announced several recent personnel moves affecting the sales, research, process study and operations departments.

Sales

Appointments at Niagara Falls include the following: FREDERICK W BONACKER, JR and GREGORY J PERREAULT will handle technical correspondence in the technical service office; VICTOR M MORGAN and JULIAN J BOYCE have been transferred to the product scheduling office, and JOSEPH LENAHAN has moved to sales records.

Research

EDWARD D WEIL has been assigned to the process research group; GEORGE C SCHWEIKER, to the resins and plastics research group; RICHARD G GARDELLA, as a chemical engineer to the pilot plant group; and FINN CLAUDI-MAGNUSSEN, to the resins and plastics group.

Process Study and Operations

JOSEPH A SONIA, JR, ROBERT B BRAUTIGAM and WALTER T GEORGE have been appointed chemical engineers, Messrs Sonia and Brautigam in process study, and Mr George in the operations department. Mr Sonia will also have additional duties as group leader.

VERONA Dyestuffs has appointed HAMILTON I DePASS as a Southern representative, with headquarters in Rock Hill, S C. Mr DePass has had years' experience as a foreman in the printing, dyeing and finishing trades.

J B GOLDBERG, consultant to the textile and allied industries, has been retained by the Department of Textile Research, North Carolina State College, as a special research consultant and as its representative in the metropolitan New York and New England areas. In his consulting capacity, Mr Goldberg will advise on the School's research program, particularly as it involves fabric development and evaluation. His services will be available to present and future clients of the Research Department in connection with projects in progress or planned at the School of Textiles. Mr Goldberg will also represent the Department in contacts with present and potential clients in the abovementioned areas.

DAVID C COLEBAUGH, JR, research chemist in the Nuchar Research Laboratory of West Virginia Pulp and Paper Company in Tyrone, Pa, has been assigned to the Chicago sales staff of the company's Industrial Chemical Sales Division.

In his new position Mr Colebaugh will assist JOHN ZIESERL, manager of the Chicago sales office, in servicing the company's active carbon, tall oil and lignin accounts in the Midwest. He began his new duties August 1.

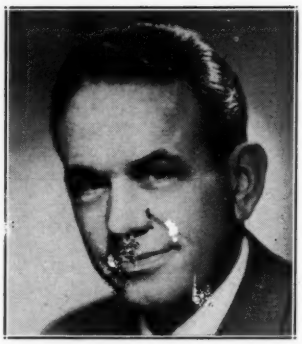
WILLIAM A SHINE and P WENZELL, JR, have joined the Development Department of Celanese Corporation of America, which was recently established with E T POWERS as director to study new technological developments here and abroad and to act as an instrument for long range planning.

Mr Shine for the last three years was director of marketing development for Arnold, Hoffman and Company Inc, and before that was with General Aniline and Film Corporation.

Mr Wenzell comes to Celanese from the United States Bureau of Mines, where for the last four years he was engaged in synthetic fuel development work.

GEORGE OSTER of the General Dyestuff Corporation, New York, has been elected president of the company's Rainbow Bowling League for the coming year. Other new officers of the League are ROBERT CLEMENTE, *treasurer;* GENEVIEVE O'CONNOR, *secretary,* and RICHARD BERGER, *assistant secretary.*

The League, which is composed of about sixty employees of General Dyestuff's headquarters building 435 Hudson Street, New York, will hold its first competition September 4 at the Sheridan Square Recreation Center. It will meet every Friday night for 35 weeks.



B M Dyer

BROOKS M DYER is the new assistant director of sales for Columbia-Southern Chemical Corporation, a wholly owned subsidiary of Pittsburgh Plate Glass Company. He has been associated with the Pittsburgh firm since 1943, as district sales manager at St Louis and as assistant district sales manager at Philadelphia. In his new post, Mr Dyer will have headquarters at the firm's general offices in Pittsburgh.

WILLIAM CARPENTER, sales representative for Columbia-Southern at St Louis, has been appointed district manager there.

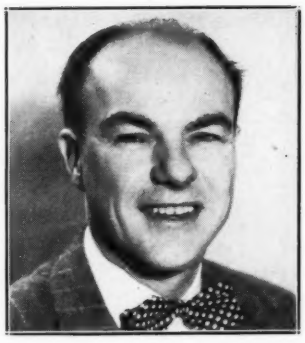
JALBERT PROCHAZKA, MAX W LEVY and JAMES C MORAN, have been appointed to new technical posts at the Grasselli plant, General Aniline & Film Corporation.

Mr Prochazka, a General Aniline executive since 1925 and formerly superintendent of the Intermediates Area, has been named administrator of technical services. In this position he will assist the plant manager in the analysis and administration of specialized plant problems of a technical nature. Mr Levy, chief chemist of the Intermediates Area, who has been associated with the company for more than 34 years, has been appointed a research and development associate in the Process Development Department. Dr Moran, employed in 1944, has been advanced from senior control chemist to chief chemist in the Area.

MICHAEL WITTE, superintendent of the Intermediates Area at the company's Rensselaer, N Y plant, has been transferred to the larger Grasselli plant where he will assume the same position, replacing Mr Prochazka.

JOHN G BROUGHTON, JR now heads midwest sales of Darex organic chemicals for the Organic Chemicals Division of Dewey and Almy Chemical Company, with headquarters at the firm's Chicago plant. Mr Broughton joined Dewey and Almy in 1952.

K K Boyd

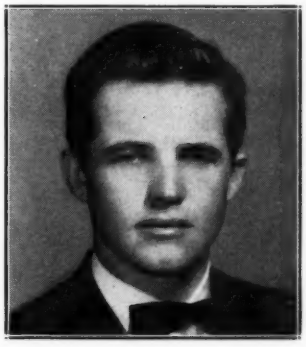


J W Ritz

W A Colby

K N Warner

H D Armitage



R Jenkins

K K BOYD, former director of sales and purchases for Emery Industries, Inc, has been elected to the newly created post of vice president in charge of sales and purchases; Mr Boyd has been with the Cincinnati firm for the past 18 years.

Emery has also announced the addition of KENNETH N WARNER to its Research Department. Dr Warner, formerly with National Aniline, B F Goodrich, and Armour & Co, will be associated with the New Chemicals Department under the leadership of C G GOEBEL.

From Emery's Chemical Sales Division comes word of several additional personnel moves.

JAMES W RITZ, who was head of the Philadelphia Office, now becomes Eastern District manager. He will retain his Philadelphia headquarters extending its coverage to include New Jersey, Delaware, Maryland, District of Columbia and portions of Pennsylvania and New York.

HARRY D ARMITAGE will continue at his present location in the Woolworth Building, New York, as District manager at large.

WILLARD A COLBY becomes the Southern District manager, with offices in Charlotte, N C. He is in charge of all chemical sales in Virginia, North Carolina, South Carolina, Florida, Tennessee, Georgia, Alabama and Mississippi. Two new men have been assigned to this district: E W SACK, formerly a production supervisor with Emery at Cincinnati, and C T BURGESS, who replaces J P CLANCY, recently transferred to Boston to assume sales responsibility for a portion of the New England area.

In addition, N F REINERT has been shifted from Chicago to the Eastern District. He has been replaced by W J RYAN, formerly associated with the Barrett Division of Allied Chemical and Dye Corporation.

HARRY D WILSON has been named a vice president and member of the directing board of the Borden Company's Chemical Division. He has been manager of the Division's Casein Department for the past three years.

Mr Wilson joined a Borden affiliate in Buenos Aires, Argentina, in 1945, and was president of that operation when transferred to New York to head the Casein Department in 1950. He will continue to direct purchases and sales of caseins and allied products, while his new responsibilities include the supervision of the Division's Export Department.

LEIGHTON H PEEBLES, JR, has joined the Research and Development Department of The Chemstrand Corporation as a chemist.

THE Fine Chemicals Division of the Pittsburgh Coke & Chemical Company, Pittsburgh, Pa, has announced the appointment of RICHARD JENKINS as textile chemist and colorist.

Prior to joining Pittsburgh Coke & Chemical Company, he was employed by the J P Stevens Company at their finishing plant in Wallace, S C and in their central dyeing and research laboratory in Greensboro, S C.

PAUL L SALZBERG, former assistant director, was promoted on July 16th to director of the Chemical Department of the Du Pont Company, succeeding the late COLE COOLIDGE. MERLIN M BRUBAKER moves into Dr Salzberg's former post.

Dr Salzberg has been associated with Du Pont research since 1928 and Dr Brubaker moves to his new position from Du Pont's Experimental Station, where he had been director of services for the past six years.

STEWART HOAGLAND has been appointed manager of corporate advertising and promotion for Interchemical Corporation.

Mr Hoagland has been associated with Interchemical in an advertising and editorial capacity since 1938, when he became editor of the *R-B-H Dispersions*, a divisional publication.

RIEGEL Textile Corporation, New York, has announced the appointment of WILLIAM F ROBERTSON as general manager of the Ware Shoals Division, and his election as a vice-president and director of the company. Mr Robertson, formerly assistant general manager of Ware Shoals, succeeds W J ERWIN, who resigned to become president and treasurer of Dan River Mills.

WILBUR M McFEELY, director of industrial relations, has also been elected a vice president of the company. He has been a member of the Board of Directors since January, 1952.

JAMES A BYARS succeeds Mr Robertson as assistant general manager at Ware Shoals. Mr. Byers' former position as superintendent of the cotton mill at the Trion Division will be filled by CLYDE C COBB.

DEWEY H NELSON will make his headquarters in Green Bay, Wisconsin as sales manager of The Buffalo Electro-Chemical Company's Midwest territory and WILLIAM H KIBBEL, JR will locate in Vancouver, Washington with similar duties as sales manager for the West Coast territory. FRANK A KRAFT will serve as a field representative for the Company, covering the midwestern states from Ft Wayne, Indiana.

GEORGE C RAMEY has assumed new duties as sales manager in charge of all sales for Grosvenor-Dale Co, Inc, Grosvenor-Dale, Conn. The Company was formerly represented by selling agents. He will be assisted by JAMES COFFEY, JR.

The appointment coincides with the opening of the mill's new sales offices at 366 Madison Ave, New York, N Y.

Patent Digest ——

(Concluded from Page 598)

tion temperature of 100° C is maintained for 24 hours. Thereafter urea is stirred in. The mixture solidifies, consisting finally of a water-soluble urea-phenol-sulfonate with fire-retarding properties.

A further improvement is said to result from a subsequent condensation of this compound with formaldehyde or formaldehyde-yielding agents.

References cited by the Patent Office comprise: U S Pat 2,271,245 (Geigy/1942); U S Pat 2,191,818 (Rohm & Haas/1940); U S Pat 2,127,068 (Geigy/1938) and U S Pat 1,841,840 (Geigy/1932), all referring to phenolsulfonate condensates with or without urea (generally proposed as tanning agents). Reference is further made to Brit P 446,379 (Thomson-Houston/1936), which describe flamproofing compositions containing phenol-formaldehyde condensates combined with urea and o-phosphoric acid.

OBITUARY

M A Falcone

MARIE ANTOINETTE FALCONE

MARIE ANTOINETTE FALCONE, 46, died at her home in Bangor, Pa on August 12th after an illness of about five months.

A graduate of Pennsylvania State College, Miss Falcone began her business career with Philadelphia Quartz Co in 1929. In November, 1938, she went with *Good Housekeeping* as a lab technician. In 1942, she became merchandise standards supervisor at the Associated Merchandising Corp. She returned to *Good Housekeeping* in 1951 as associate director of the textile laboratory, and in addition, taught at the evening school at New York University in 1952. Earlier this year she joined United Hosiery Mills Corp of Chattanooga, Tenn.

Miss Falcone was active in the AATCC and AATT. She had been serving the New York Section, AATCC, as Chairman of the Membership Committee.

She is survived by her parents, a brother and three sisters.

A O Jaeger

ALPHONS OTTO JAEGER

ALPHONS OTTO JAEGER, 67, of American Cyanamid Company, died suddenly on July 21st.

During his 40 years in the chemical industry, Dr Jaeger had hundreds of patents granted on chemical manufacturing processes and developments, among the most important of which was a vanadium catalyst for sulfuric acid production. Other patents covered process equipment for manufacturing sulfuric acid; catalyst and equipment for organic oxidation; numerous organic acids, wetting agents, and other textile chemicals; leather and paper chemicals; paints; lacquers; varnishes; terpenes; tall oil and others.

Dr Jaeger was born in Bergzabern, Germany, in 1886, studied chemical engineering at the Institute of Technology, Friedburg, Germany, from 1906 to 1907, received a B S degree from the University of Zurich, Switzerland, in 1911, and a Ph D in chemistry in 1913 from the University of Basel, Switzerland.

From 1914 to 1923, he was a research chemist and department head of Badishe Aniline & Soda Factory, Ludwigshafer (Rhein). He came to the United States in 1923 and was a research chemist and group leader of National Aniline & Chemical Company, Buffalo, New York. He became a consulting chemist for Monsanto Chemical Company in 1925, and a year later was named technical director and director of research of the Seldon Company of Bridgeville, Pennsylvania. In 1929 he was elected vice president of Seldon when that firm merged with American Cyanamid Company.

In 1938 he joined the parent firm in New York and, until 1951, was chairman of the Development Committee, director of the General Technical Department, and a member of the Research, New Projects, and Process Development Committees. Following his retirement in 1951, he had been a consultant for the Company.

Dr Jaeger is survived by his wife, the former Hedwig Maria Wuermell, and their four children, Mrs L O'Neill, Jr; Mrs Harry A Behling; Dr Carl Alphons Jaeger; and Raymond Alphons Jaeger.

8)
ntained
rred in.
finally
lfonate

o result
of this
formal-

Office
/1942);
/1940);
nd U S
eferring
vith or
as tan-
made
ouston/
g com-
dehyde
and o-

ates in
st and
Chem-
k. He
nsanto
a year
or and
Com-
ia. In
of Sel-
nerican

irm in
airman
irector
nt, and
rojects,
nittees.
he had
.
fe, the
d their
; Mrs
lphons
ger.

1953